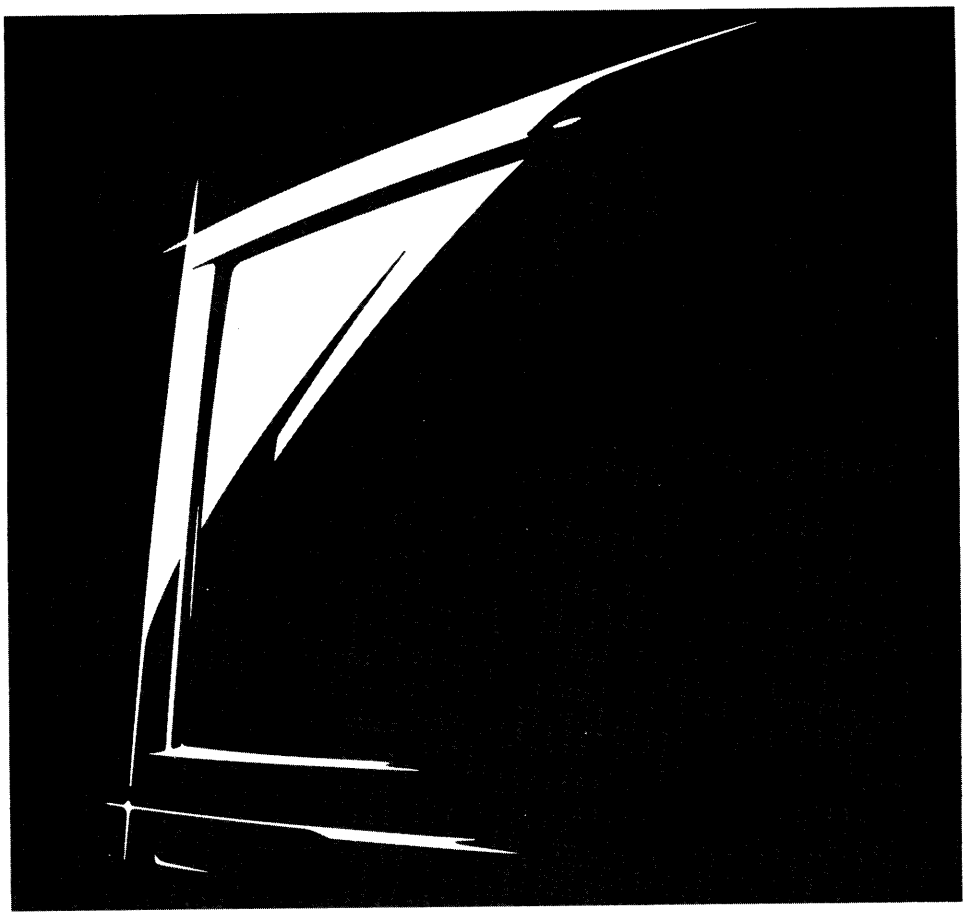
TOSHIBA

Color Television

OWNER'S MANUAL

CF27H50/CF32H50/CF36H50



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Dear Customer

Congratulations! You have purchased one of the finest Color TV's on the market!
This manual will help you use the many exciting and useful features to make your TV viewing more enjoyable than ever before.
Before operating your TV set, please read all these safety and operating instructions completely and then retain for future reference.

Customer's Record

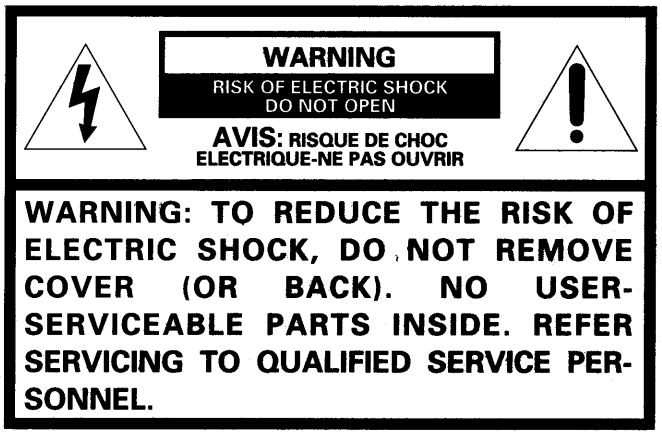
You will find the model number and serial number on the back of your TV set.
Record these numbers in the spaces provided below. Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model Number _____

Serial Number _____

Safety Precautions

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN
AVIS: RISQUE DE CHOC
ELECTRIQUE-NE PAS OUVRIR
WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.

The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

This TV set may be used only with TOSHIBA stand shown on page 36. Use with other stands may result in instability causing possible injury.

CAUTIONS:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS ON THE POLARIZED PLUG.

ATTENTION:
POUR PRÉVENIR LES CHOCS ÉLECTRIQUES, NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉS À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Avoid displaying stationary images on your TV screen for extended periods of time. Stationary patterns generated by PIP display, computer displays, video games, stock market reports, etc. can become permanently engrained on the picture tube. This damage is not protected by your warranty as it is the result of misuse. Should you wish to use your TOSHIBA Television to display still images, it is always advisable to reduce brightness and contrast settings. Never leave a PIP display, a computer or video game display unattended.

NOTE TO CATV SYSTEM INSTALLER IN THE USA:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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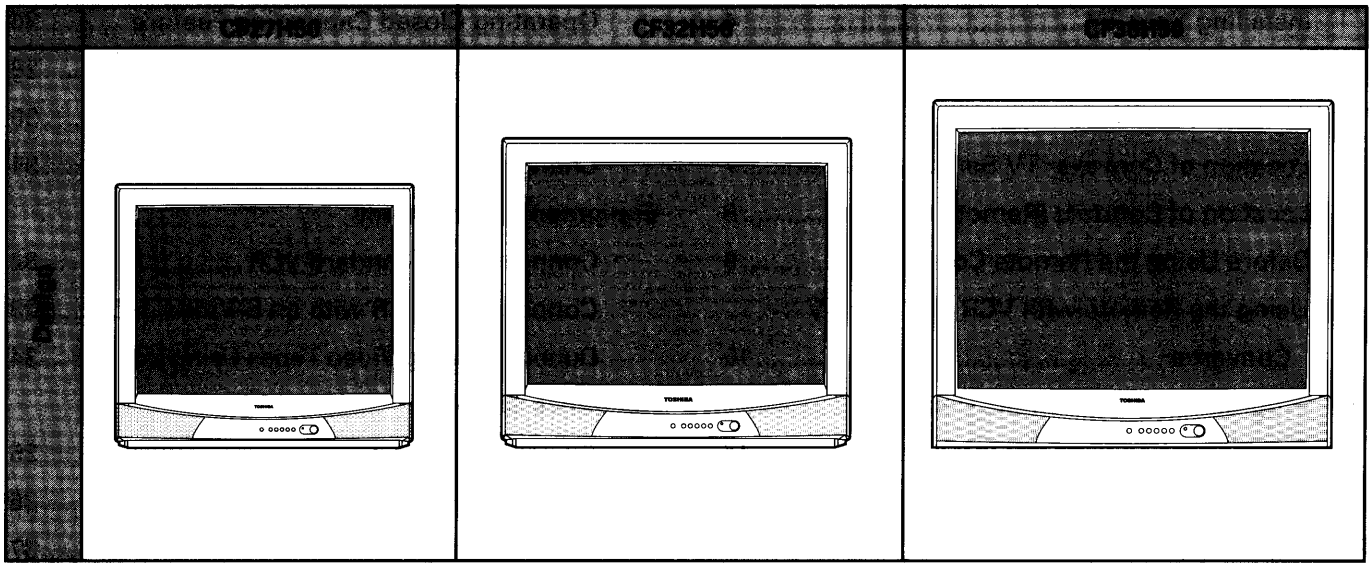
Introduction

This manual applies to models CF27H50, CF32H50 and CF36H50, and there are slight differences among them. The front and rear panel illustrations in the text are based on CF32H50. Check the model of your TV before using this manual.



Installing your TV

Where to install

Place the TV on the floor or on a sturdy platform. The mounting surface should be flat and steady.

Lighting

Do not place the TV in a room where direct lighting strikes the screen. Use soft and indirect lighting.

Air circulation

Place the TV far enough from the walls to allow proper ventilation. This will prevent the TV from overheating and avoid possible damage to the TV. Avoid dusty places too.

Power supply

Plug into an electrical outlet with standard household power (120 volt AC, 60Hz). Do not change the plug's safety prong. See the right column.

WARNING :

TO AVOID PERSONAL INJURY

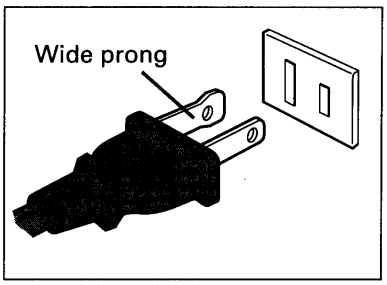
- Do not stand or climb on the TV.
- Do not put a VCR or any heavy object on top of the TV.

CAUTION :

As a safety feature, the plug has one prong wider than the other. It will fit only one way into a standard electrical outlet. If the plug will not fit into the outlet, try turning it around. If the plug will not fit either way, the outlet is probably old and non-standard.

You will need to have a new outlet installed by an electrician.

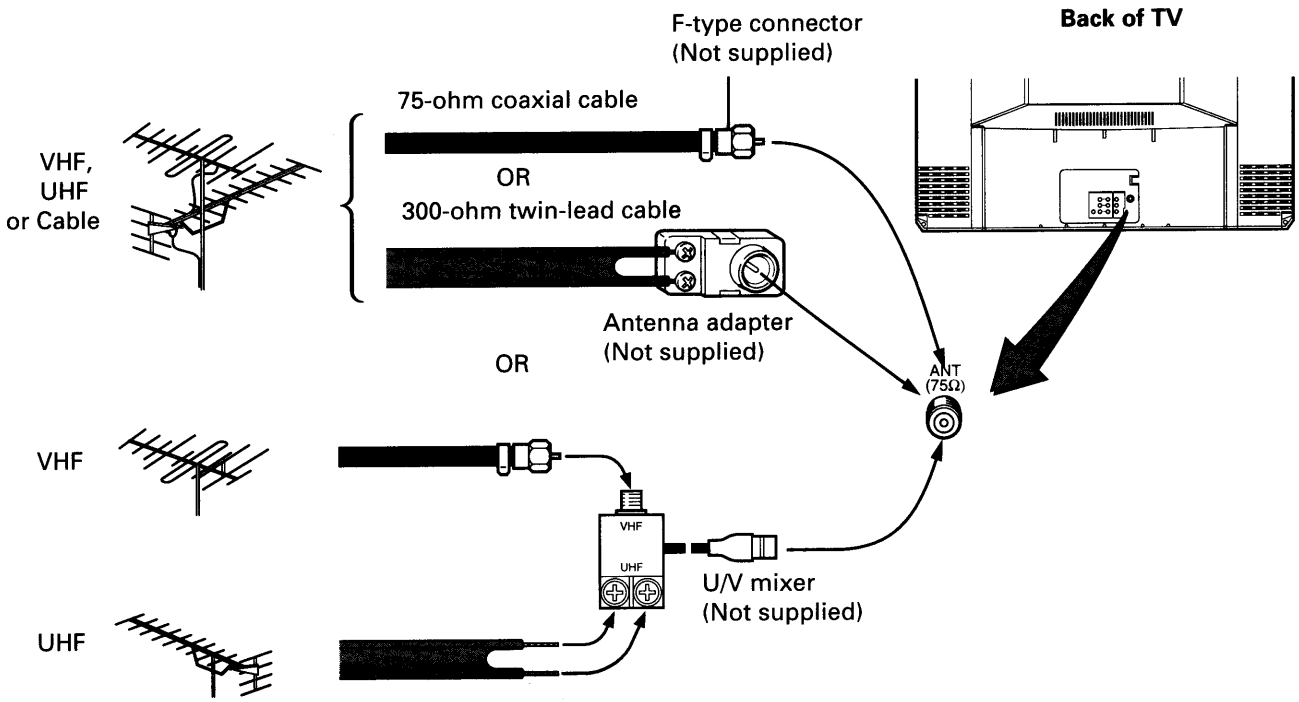
DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.



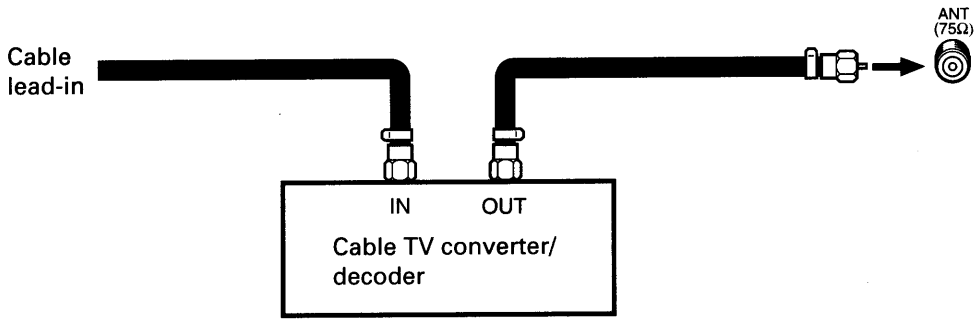
Antenna/Cable TV Connection

You can use either an indoor or outdoor antenna to receive VHF and/or UHF channels.
Channels 2 - 13 are VHF channels, and channels 14 - 69 are UHF channels.
We recommend using an outdoor antenna for better picture quality.
You can receive Cable TV by connecting a cable supplied by your local cable company.

To connect an antenna or Cable without a decoder box



To connect a Cable with a decoder box



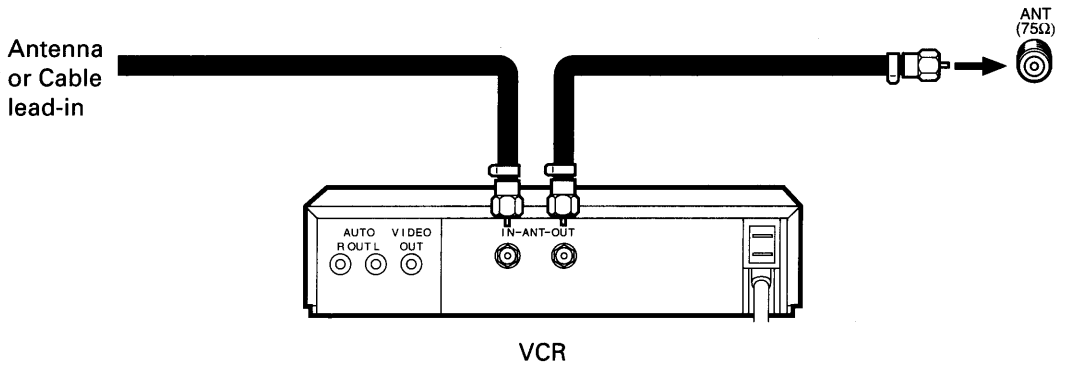
Notes:

- You can select scrambled or unscrambled channels via the converter/decoder box by using the converter's channel keys. Place your TV on channel 3 or 4 to match the converter's output channel.
- The decoding device may or may not be a part of the cable converter.

Antenna/Cable TV Connection (Continued)

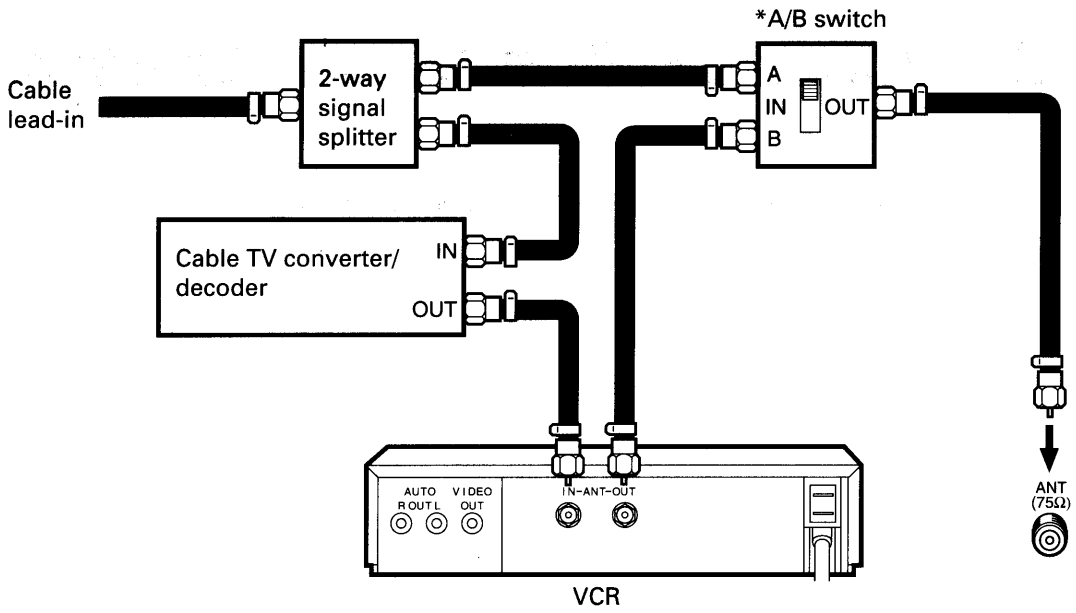
After ANTENNA/CABLE connections are made, you are still required to connect the VCR using VIDEO/AUDIO connecting cables for playback of good quality from the VCR. See page 32.

To connect an Antenna/Cable TV and VCR



Note: Tape playback may often cause the VCR to interrupt antenna signal to the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.

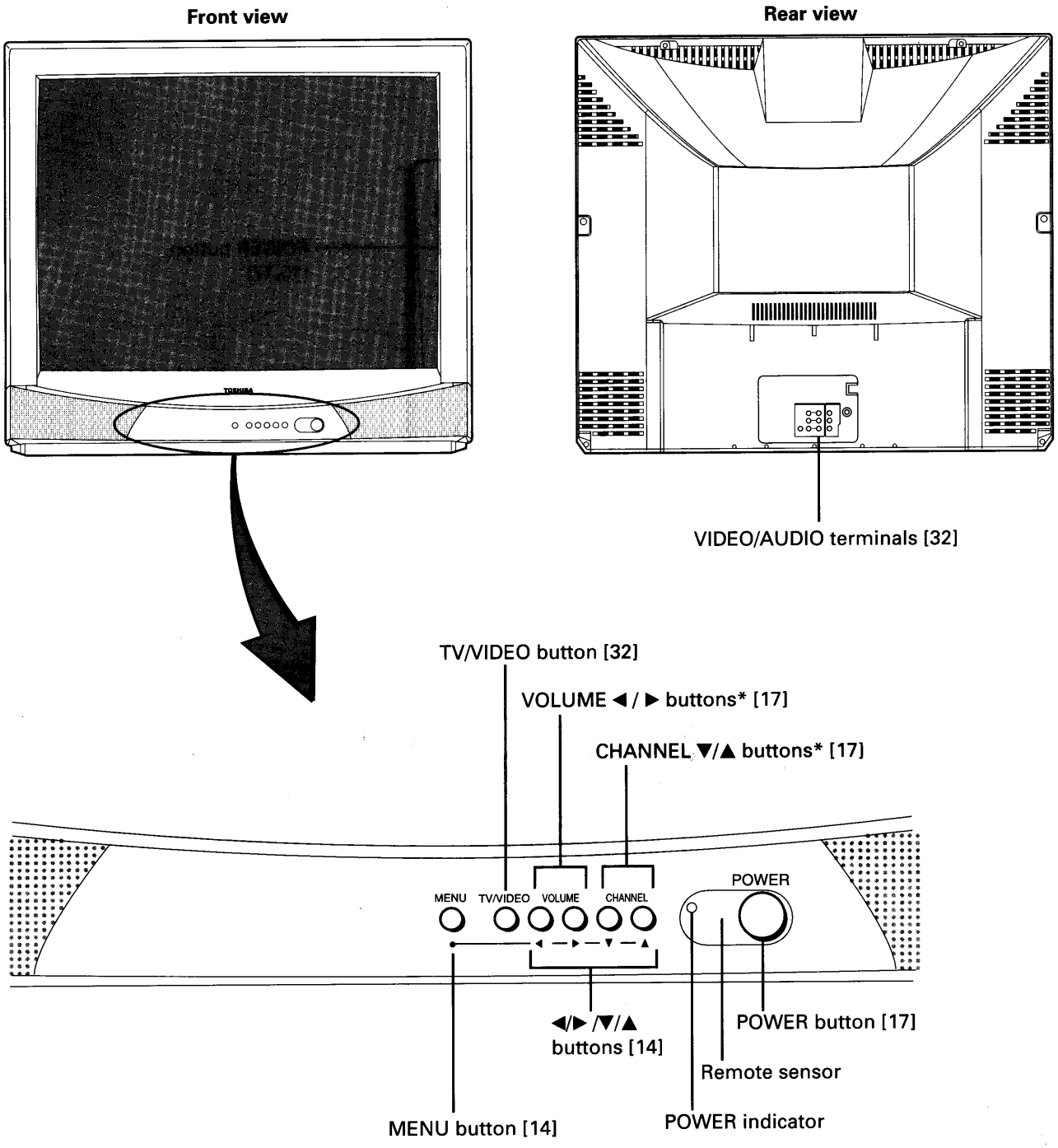
To connect a Cable TV with a decoder box and VCR



Note: "A" position on the A/B switch (*) allows you to select unscrambled channels using the TV's channel keys. "B" position on the A/B switch allows you to select scrambled channels via the cable TV converter/decoder using the converter's channel keys. Place your TV and VCR on channel 3 or 4 to match the converter's output channel.

Location of Controls (TV Set)

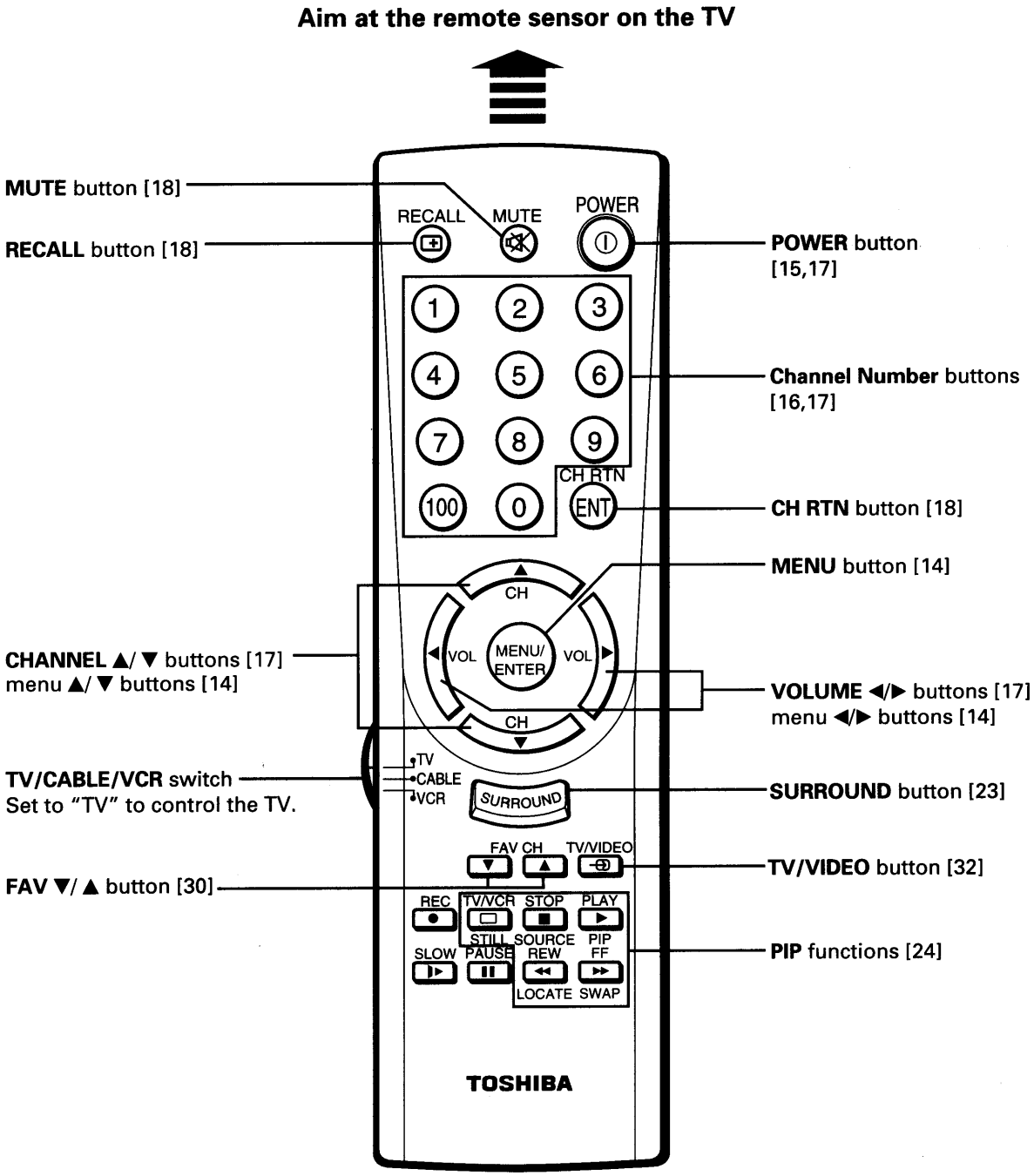
For specific use of each control, consult the corresponding page numbers in brackets.



*Dual fuction buttons

Location of Controls (Remote Control)

Only the buttons that are used to operate the TV set are described here.
For details on the use of each control, refer to pages in brackets.



Before Using the Remote Control

Introductions

With this Remote Control, you can operate your TV and most models of remote-controlled VCR's and Cable TV converters even if they are different brands.
However, this Remote Control must first be programmed to control other brands of VCR's and/or Converters. If you will be using your TV set with a TOSHIBA VCR, your Remote has already been preprogrammed for you.

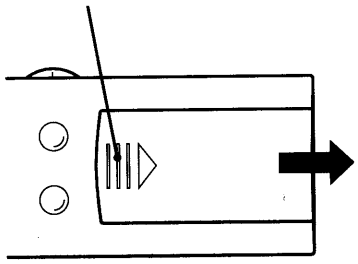
- Before attempting to operate your Remote Control, install the batteries according to the section "To install batteries" shown below.
- For more detailed instructions, see the section "Programming the Remote Control" on page 11.

Notes:
- After installing new batteries, the Remote Control will set itself to the codes for TOSHIBA's TV and VCR. If you are using the Remote Control to operate equipment that uses different codes, it will have to be reprogrammed for those codes.
- This Remote Control may have functions not available on the original remote controller.
- These functions may or may not operate your VCR or Cable TV Converter. Refer to the owner's manuals supplied with the equipment to see which functions are available.
- The remote controller supplied with your VCR or cable TV converter may have keys not duplicated on this Remote Control. If these functions are desired, the original remote controller will have to be used.

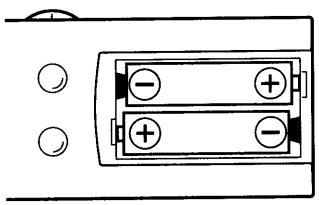
To install batteries

1 Place the Remote Control with the face down. Press down on the ridged area of the battery cover and slide it off.

Press and slide to remove.



2 Place two "AA" size batteries, matching the + and – signs on each battery to the + and – signs of the battery compartment.



3 Replace the battery cover until the lock snaps.

CAUTION:
- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used old batteries with new ones.
- Do not mix battery types.

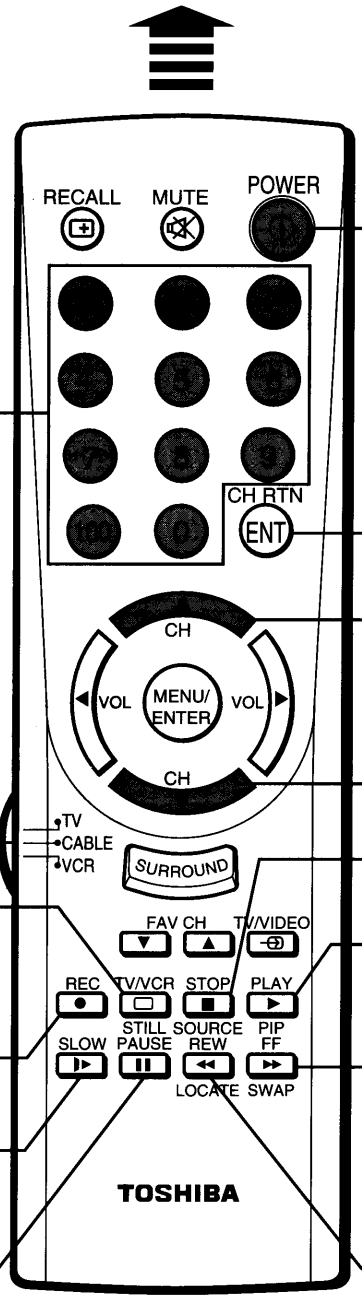
Tips for Best Operation

- For optimum performance, aim the Remote Control directly at the TV from a distance of no more than 16 ft (5m) and be sure there is no obstruction between the Remote Control and the TV.
- If your Remote Control does not always adjust the TV as you wish, you probably need to replace the batteries.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- If you do not intend to use the Remote Control for a long period, remove the batteries.

Using the Remote with VCR or Cable TV Converter

- To control a TOSHIBA VCR, first set the TV/CABLE/VCR switch to "VCR" position. The buttons shown below will then control the VCR. The rest of the buttons operate the TV as usual.
  If you have another brand of VCR, you can probably program your Remote to control it.
  Details are on page 11.
- To control a cable TV converter, this Remote Control must be programmed to recognize the brand of your converter. See page 11. The shaded buttons can be used to control the cable TV converter.
  Set the TV/CABLE/VCR switch to "CABLE" position whenever you control the cable TV converter.

Aim at the VCR or cable TV converter



Channel Number buttons
Press the numbers desired for direct access.

TV/CABLE/VCR switch
"CABLE": To control the cable TV converter
"VCR": To control the VCR

TV/VCR button
Press to select the TV mode to view one program while recording another program.

REC (record) button
Press to start recording.

SLOW button
Press to view a slow-motion picture in playback mode.

PAUSE button
Press to freeze the picture during playback or recording.
Press again to release.

POWER button
Press the button to turn the VCR (or converter) on.
Press again to turn off.

ENTER button
Some VCR's and cable TV converters require "ENT" to change channel numbers.

CHANNEL ▲ / ▼ button
Press ▲ to select next higher channel.
Press ▼ to select next lower channel.

STOP button
Press to stop the tape.

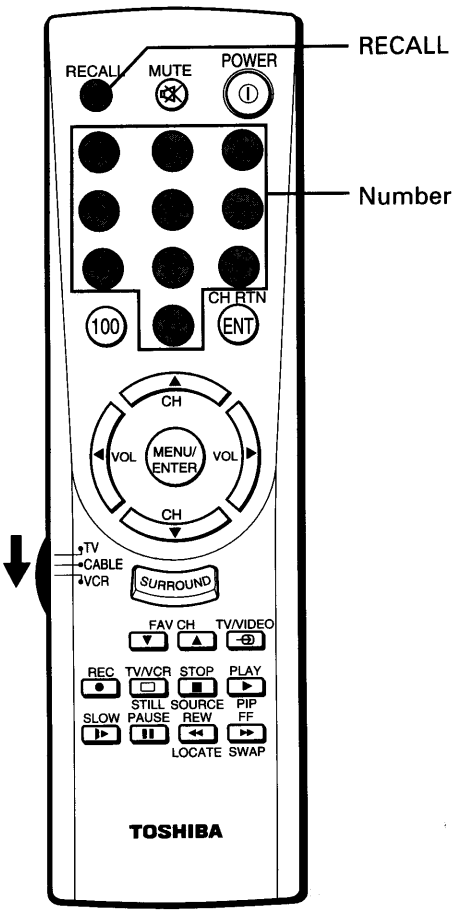
PLAY
Press to begin tape playback.

FF (fast forward) button
Press to rapidly advance the tape.
In playback mode, press to view the picture moving rapidly in forward direction.

REW (rewind) button
Press to rewind the tape.
In playback mode, press to view picture moving rapidly in reverse.

Programming the Remote Control

- This Remote Control is preprogrammed to operate TOSHIBA VCR's.
- To use VCR's other than Toshiba models (or cable converter), perform the following procedures before operating.



To control other brands of VCR's and cable TV converters

1 Refer to the ***"VCR code table"*** (or ***"Cable TV converter code table"***) on pages 12 and 13 to find the code number that corresponds to the brand name of your VCR (or converter).

If more than one number is listed, try each one separately until you find the one that works.

2 Set the **TV/CABLE/VCR** switch to "VCR" (or "CABLE").

3 Hold down **RECALL** while pressing the **Number** buttons for the three digit code number for your brand of VCR (or converter).

4 Point the Remote Control at the VCR (or at the converter) and press POWER to test the code number.
- **If the right number was entered,** the VCR (or the converter) should turn off.
- **If the VCR (or the converter) does not respond to the Remote Control,** repeat steps 1 to 4 with another code number.

Notes:
- You have to reprogram the Remote Control when you change its batteries.
- Some newer VCR's are capable of working on either of two remote codes. These VCR's have a switch labeled "VCR1/VCR2". If your VCR has this kind of switch, and does not respond to all the code numbers for your VCR brand name, set the switch to another position ("VCR1" or "VCR2") and reprogram the Remote Control.

For future reference, write the code you used.

VCR CODE: _____

CABLE CODE: _____

Programming the Remote Control (Continued)

- In some rare cases, you may not be able to operate your non-Toshiba equipment with the supplied Remote Control. This is because your equipment may use a code that is not provided with this Remote Control. In this case, please use the equipment's own remote control.

VCR code table

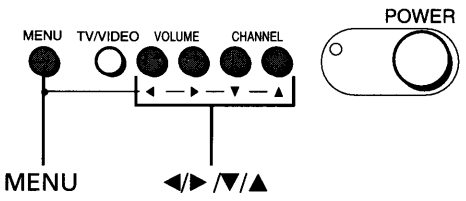
BRAND NAME	CODE NUMBER
Adventura	019
Aiko	297
Aiwa	019
Akai	060,068,080,125, 261
American High	054
Asha	259
Audiovox	056
Beaumark	259
Bell & Howell	123
Brandt	206
Broksonic	140,203,230,314, 380
Calix	056
Canon	054
Capeheart	039
Carver	100
CCE	091,297
Citizen	056,297
Colt	091
Craig	056,066,091,259
Curtis Mathes	054,060,079
Cybernex	259
Daewoo	039,064,297
Daytron	039
Dynatech	019
Electrohome	056
Electrophonic	056
Emerex	051
Emerson	019,021,056,062, 080,087,140,203, 227,228,230,231, 297,313,314,380, 498
Fisher	066,073,085,123
Fuji	052,054
Funai	019,344
Garrard	019,344
GE	054,079,084,221
GoldStar	037,056,057
Gradiente	019
Harley Davidson	019
Harman/Kardon	057,094
Harwood	087,091
Headquarter	065
HI-Q	066
Hitachi	060,061,084,124, 185,254
Jensen	060
JVC	027,060,086
Kenwood	057,060,086
KLH	091
Kodak	054,056
Lloyd	019
Lloyd's	227
Logik	091
LXI	056
Magnavox	054,058,100,129, 168
Magnin	259
Marantz	054,100
Marta	056
Matsushita	054
MEI	054
Memorex	019,054,056,058, 065,066,067,123, 259
MGA	062,080
MGN Technology	259
Minolta	061,124
Mitsubishi	062,080,086,094, 192,233,261
Motorola	054,067
MTC	019,259
Multitech	019,091
NAD	077
NEC	057,059,060,069, 086
Nikko	056
Noblex	259
Olympus	054
Optimus	056,067,077,123
Optonica	081
Orion	498
Panasonic	054,096,181,244, 473
Penney	054,056,057,059, 061,073,259
Pentax	061,084,124
Philco	054
Philips	054,081,100,129
Pilot	056
Pioneer	077,086
Portland	039
Protec	091
Pulsar	058
Quarter	065
Quartz	065
Quasar	054,096
Radio Shack	019,056,344
Radix	056
Randex	056
RCA	061,079,084,096, 124,125,168,221
Realistic	019,054,056,065, 066,067,081,085, 123,259
Ricoh	053
Runco	058
Samsung	064,259
Sanky	058,067
Sansui	060,086
Sanyo	065,066,123,259
Scott	062,064,140,203, 229,230,231
Sears	054,056,061,065, 066,073,085,123, 124
Sharp	067,081
Shintom	091
Shogun	259
Singer	091
Sony	051,052,053,054
STS	061
Sylvania	019,054,062,100, 129
Symphonic	019,344
Tatung	060
Teac	019,060
Technics	054,181
Teknika	019,054,056,071
Telefunken	206
TMK	227,259
Toshiba	062,064,085,229, 231,385
Totevision	056,259
Unitech	259
Vector	064
Vector Research	057,059
Video Concepts	059,064,080
Videosonic	259
Wards	019,054,061,066, 067,081,091,168, 231,259
XR-1000	019,054,091
Yamaha	057
Zenith	052,053,058

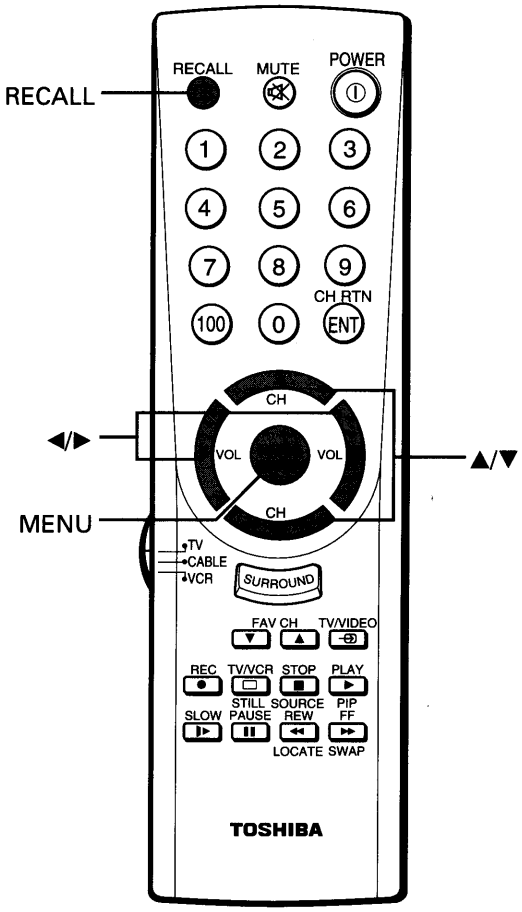
Cable TV converter code table

BRAND NAME	CODE NUMBER
ABC	020,022,026,027, 030,032,033,036, 066
Antronix	041
Archer	041,058,172
Belcor	075
Cable Star	075
Cabletenna	041
Cableview	041
Century	172
Citizen	172
Colour Voice	044,050
Comtronics	059,079
Contec	038
Dae Ryung	027
Eastern	021
Focus	419
Garrard	172
GC Electronics	075
Gemini	034,089
General Instrument	030,295
GoldStar	059,163
Hamlin	028,039,053,278, 292
Hitachi	030
Hytex	026
Jasco	172
Jerrold	022,030,031,033, 034,066,295
Macom	052
Magnavox	046
Memorex	019
Movie Time	175
NSC	089,175
Oak	026,038,267
Panasonic	019,040,126
Paragon	019
Philips	044,046,047,048, 049,050,172
Pioneer	042,163,552
Popular Mechanics	419
Pulsar	019
RCA	040
Recoton	419
Regal	039,278,292
Regency	021
Rembrandt	030,089
Runco	019
Samsung	059,163
Scientific Atlanta	025,027,036,296
Signal	034,059
Signature	030
SL Marx	059
Sprucer	040
Standard Components	174
Starcom	022,034,066
Stargate	034,059
Starquest	034
Sylvania	020
Teleview	059
Texscan	020
Tocom	031,032,078
Toshiba	019
Tusa	034
Unika	041,172
United Artists	026
United Cable	022
Universal	041,058,075,172
Viewstar	046,079,230
Zenith	019
Zentek	419

Menu Function (General Instructions)

We suggest you familiarize yourself with the procedure before using the Menu function.
To adjust any TV feature, the use of the Menu function is required. The adjustments that can be made to the TV appear on the screen.



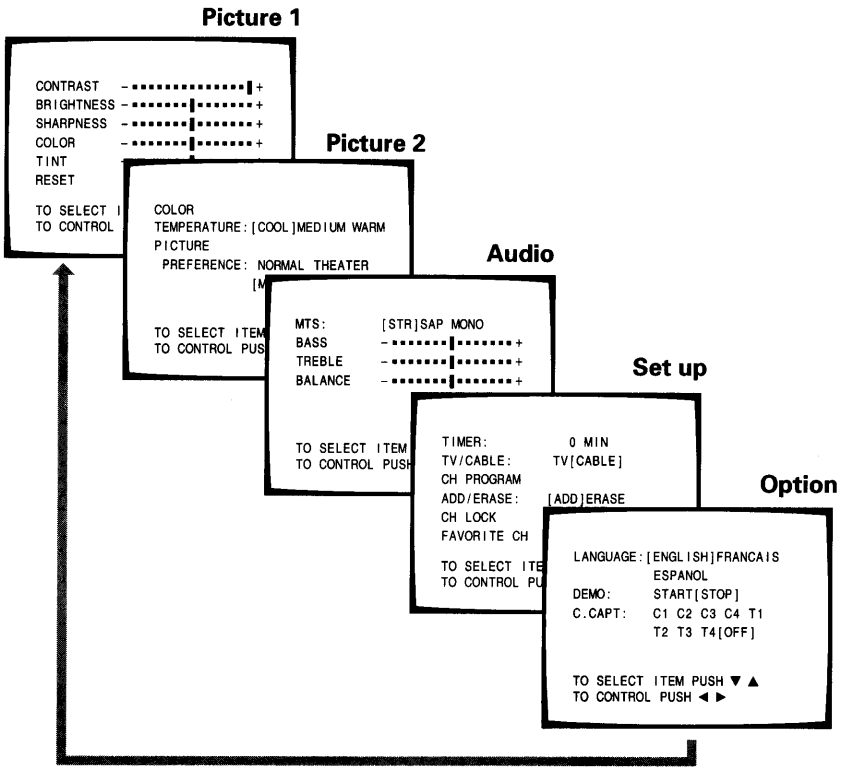


Notes:

- The ◀/▶ buttons will function as the VOLUME ◀/▶ buttons when no menu display is on the screen.
- The ▼/▲ buttons will function as the CHANNEL ▼/▲ buttons when no menu display is on the screen.

MENU button (on TV and on Remote)

Each time you press **MENU**, the Picture, Audio, Setup or Option menu on-screen display is selected in order, then press ▼ or ▲.



▼/▲ buttons (on TV and on Remote)

Use ▼ or ▲ after you have selected the on-screen menu you want to adjust with the MENU button.
Each time you press ▼ or ▲, the function to be adjusted will be selected in order.

▼ button ..... from top to bottom
▲ button ..... from bottom to top

The selected function will be displayed in magenta.

◀/▶ buttons (on TV and on Remote)

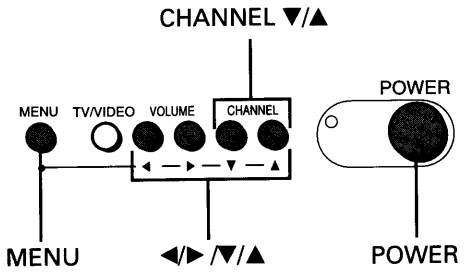
Use ◀ or ▶ to adjust the function you have selected with the ▼/▲ buttons.

RECALL button (on Remote)

The above four menu displays will automatically disappear from the screen if no control has been operated for about 15 seconds.
If you want to clear the screen instantly of all menu displays, press **RECALL**.

Programming Channel Memory

The channel memory is a list of TV channel numbers your TV will stop on when you press the CHANNEL ▼ or ▲ button.
First, use the TV/CABLE and CH PROGRAM functions to preset all active channels in your area.
If necessary, arrange the preset channels with the ADD/ERASE functions so that you can tune into only desired channels.

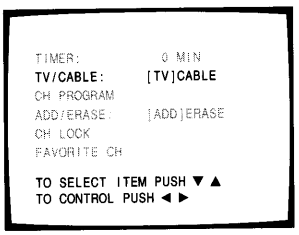


TV/CABLE function

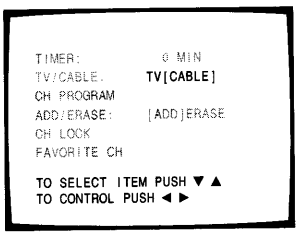
1 Press **POWER** to turn on the TV.

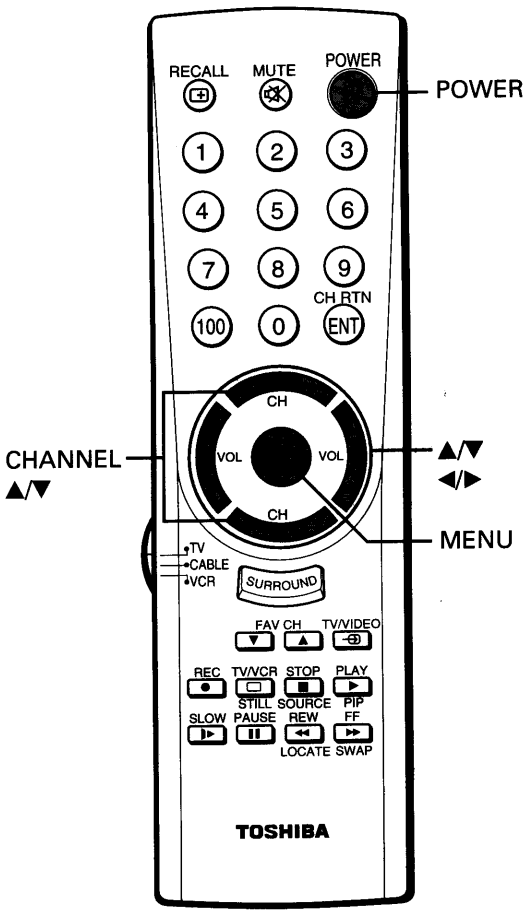
2 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

3 Press ▼ or ▲ until "TV/CABLE" is displayed in purple.



4 Press ◀ or ▶ until the mode that corresponds to your TV signal system is displayed in purple.
TV: TV broadcasts signals.
(VHF channels 2 through 13 and UHF channels 14 through 69)
CABLE: Cable TV signals.
Cable channels 1 through 125)

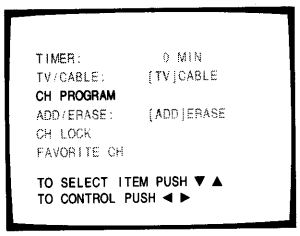




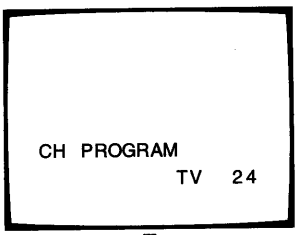
CH PROGRAM function

1 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

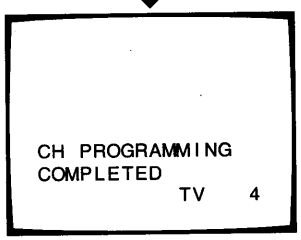
2 Press ▼ or ▲ until "CH PROGRAM" is displayed in purple.



3 Press ◀ or ▶ to start channel programming.
The TV will automatically cycle through all the TV or CABLE channels depending on the mode selected, and store active channels in the channel memory.

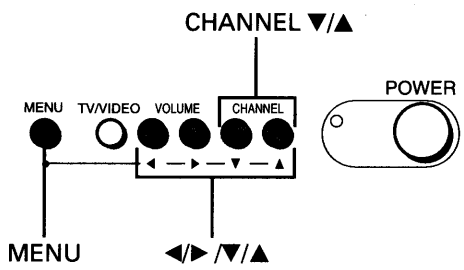


4 When channel programming is complete, you will see the message at the right.



5 Press **CHANNEL** ▼ or ▲ to make sure the channel programming has been done properly.

Programming Channel Memory (Continued)



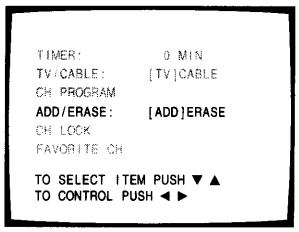
ADD/ERASE function

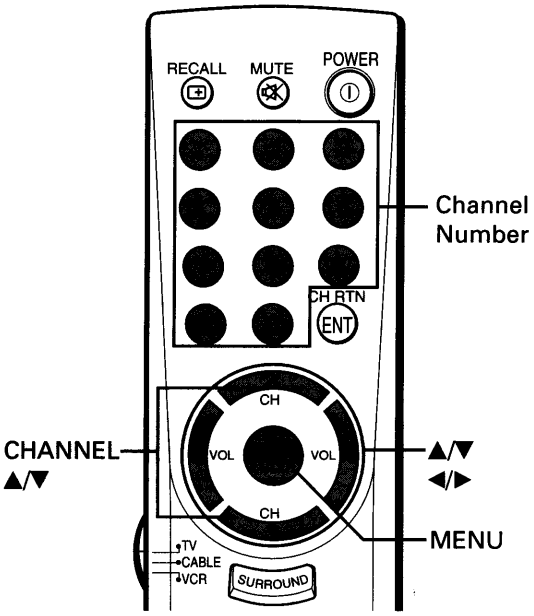
After performing the CH PROGRAM function, you can add or erase specific channels.

1 Select the channel you want to erase using the **CHANNEL ▼** or **▲** button, or select the channel you want to add using the **Channel Number** buttons.

2 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

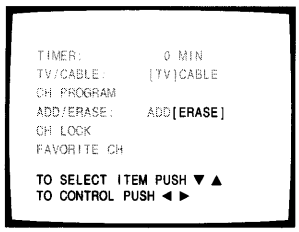
3 Press **▼** or **▲** until "ADD/ERASE" is displayed in purple.



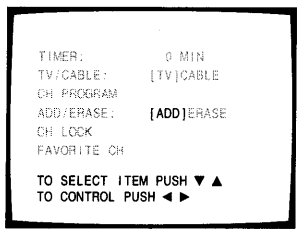


4 Press **◄** or **►**:

To erase the channel
Press the button until "ERASE" is displayed in purple indicating that the channel has been erased from the memory.



To add the channel
Press the button until "ADD" is displayed in purple indicating that the channel has been memorized.



5 Repeat steps 1 to 4 for other channels.

You have now completed the channel programming.

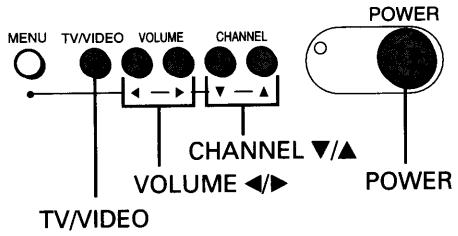
CABLE channel reference chart

Corresponding CABLE channel	A-8	5(A-7)	6(A-6)	A	B	C	·····	U	V	W	AA	BB	·····	XX	YY	ZZ	AAA	BBB	65	66
Corresponding CABLE channel	67	68	69	·····	92	93	94	A-5	A-4	A-3	A-2	A-1	100	101	102	·····	123	124	125	

The above chart is typical of many cable system channel allocations. If in doubt, consult your cable company.

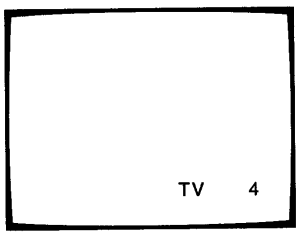
Watching TV Programs

● First set the TV/CABLE/VCR switch on the Remote Control to "TV" position.



1 Press **POWER** to turn on the TV.

To turn off the TV, press **POWER** again.

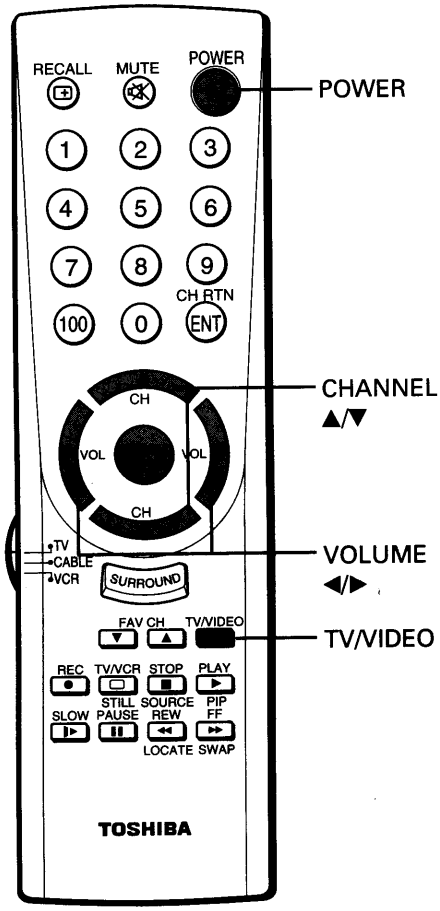


2 Select a channel in one of the following two ways.

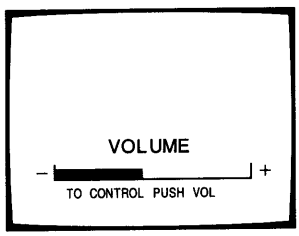
● **To scan the memorized channels in numerical sequence**
Press **CHANNEL ▲** to select the next higher channel.
Press **CHANNEL ▼** to select the next lower channel.
Press the button again to select the next memorized channels.

● **To select a channel directly**
Press the **Channel Number** buttons (0-9 and 100).
To select channel 4, press "4" (or press "0", "4").
To select channel 38, press "3", "8".
To select channel 125, press "100", "2", "5" in sequence.

If you cannot select certain channels, either TV (off the air) or CABLE channels
Check if the TV/CABLE function is properly set. See page 15.



3 Press **VOLUME ◀/▶** to adjust the volume.
To increase the volume, press ▶.
To decrease the volume, press ◀.



Auto-Power-Off

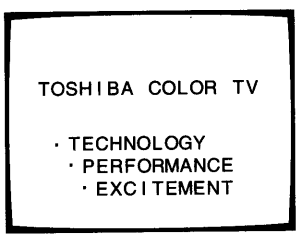
If a vacant channel is tuned or TV broadcast for a day is finished, the TV will automatically turn off after about 15 minutes.
This feature does not operate in the VIDEO mode.

Last Mode Memory

If the power is cut off while you are viewing the TV and the power is resupplied, the TV is turned on automatically by the *Last Mode Memory* feature. If the power is going to be off or when you leave home for a long time, remove the power plug from the wall outlet to prevent the TV from turning on in your absence.

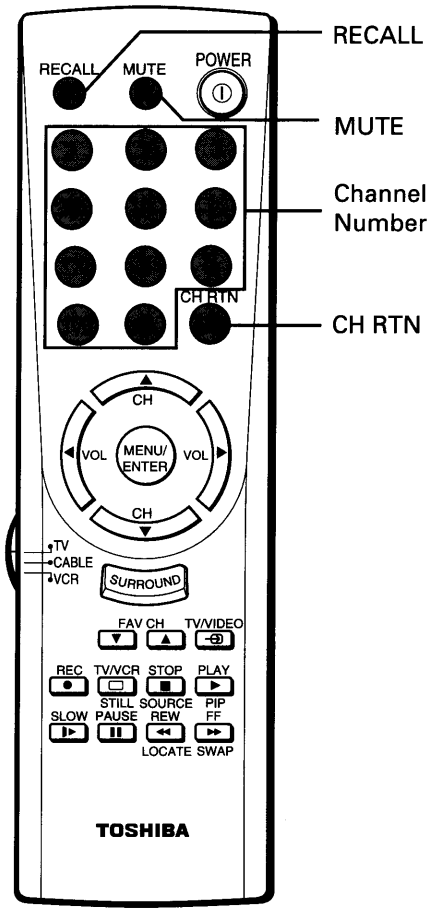
Demonstration Mode

When this function is activated, your TV will automatically display a variety of its on-screen menus and special features, this function is provided for demonstration purpose only.
To start demonstration, select "DEMO [START]" in the Option menu. (See page 14.)
To stop, press **RECALL** or **POWER**.



Watching Video Input
The TV/VIDEO button is used to view the signals coming from other devices like VCR's or Laser Disc Players connected to this TV.
Details are on page 32.

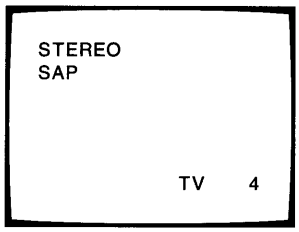
Convenient Remote Functions



To display on-screen information

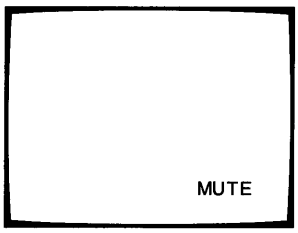
Press **RECALL** to display the following on-screen information.

- Channel number
- VIDEO mode selected
- Stereo or SAP audio status



To mute the sound

Press **MUTE** to mute the sound. The word "MUTE" will be displayed on the screen as shown. This is useful during telephone calls or other interruptions.
To restore the sound, press **MUTE** again.



Note: When the MUTE button is pressed, the Closed-Captioned feature "C1" is activated. ("MUTE" on-screen display will disappear.) To deactivate, press the MUTE button again. (This feature only functions when the Closed Caption mode is set to "OFF".)

To change quickly between two channels

Press **CH RTN** to return to the last channel viewed.
This is useful should you want to view two channels. This allows you to view two programs without entering an actual channel number each time.

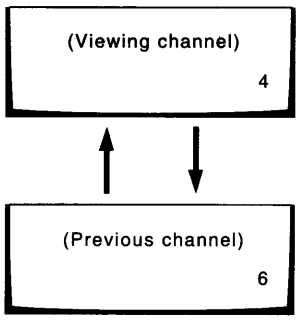
To operate this function

1 Select the first channel you want to view.

2 Select the other channel with the **Channel Number** buttons.

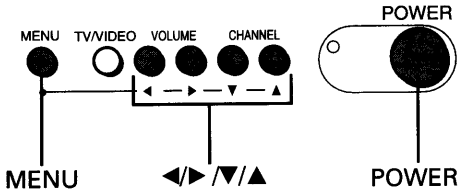
3 Press **CH RTN**.
The previous channel will return.

Each time you press **CH RTN**, the TV will switch back and forth between the two channels.



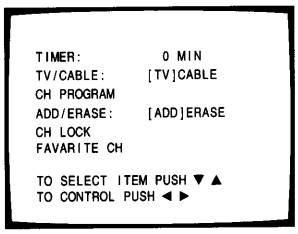
Setting the Off-Timer (Sleep Timer)

With the off-timer, you can set the TV to turn off automatically after a pre-determined period of time (up to 180 minutes in 10 minute units).

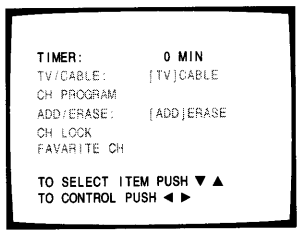


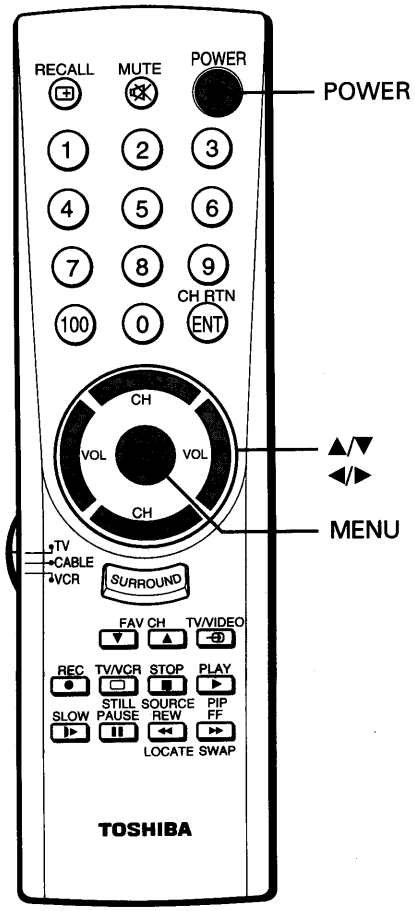
To set the off-timer

1 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

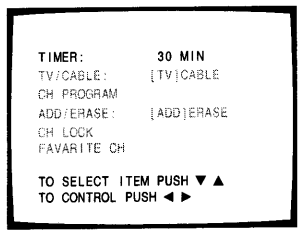


2 Press ▼ or ▲ until "TIMER" is displayed in purple.





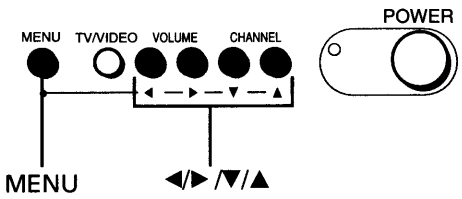
3 Press ◀ or ▶ to enter the length of time you want the TV to stay on.
Each time you press the button, the time display will increase (▶)or decrease (◀) by 10 minutes.



0 → 10 ---------- → 170 → 180 MIN

To cancel the setting
Press **POWER** twice, once to turn the TV off and once to turn it on again.

Adjusting the Picture

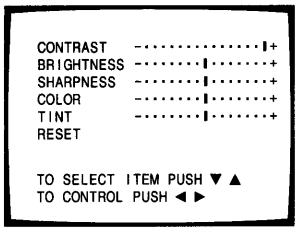


To adjust the picture quality

You can adjust the picture quality (CONTRAST, BRIGHTNESS, SHARPNESS, COLOR and TINT) to suit your taste.

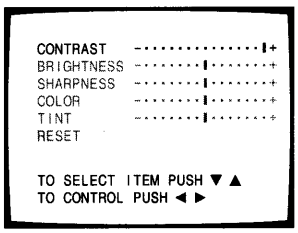
1 Press **MENU** repeatedly until the Picture menu is displayed on the screen.

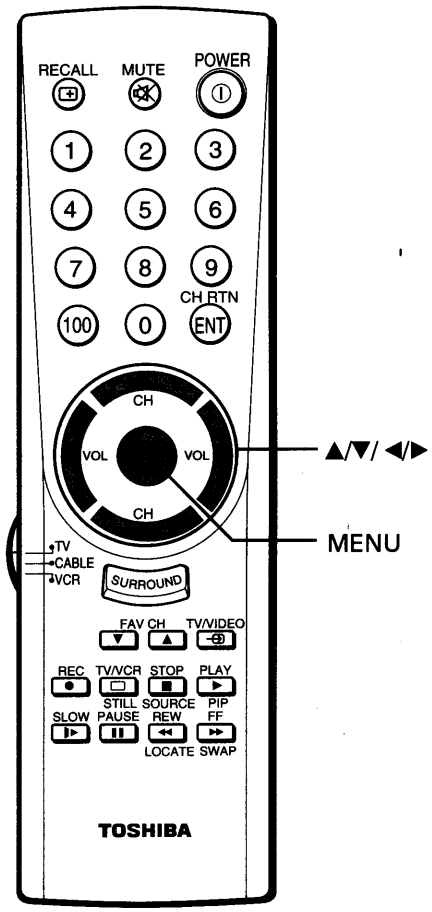
2 Press ▼ or ▲ until the item you want to adjust is displayed in purple.



3 Press ◀ or ▶ to adjust the level.

Example: CONTRAST adjustment mode display





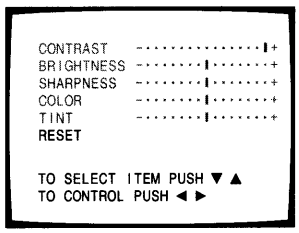
	◀	▶
CONTRAST	lower	higher
BRIGHTNESS	darker	lighter
SHARPNESS	softer	sharper
COLOR	paler	deeper
TINT	reddish	greenish

The above five picture functions you have adjusted will be stored in the "MEMORY" of the PICTURE PREFERENCE function. To use this setting, see page 21.

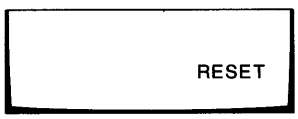
To reset the Picture and Sound adjustments to the factory-preset status (See Note on page 21).

1 Press **MENU** repeatedly until the Picture 1 menu is displayed on the screen.

2 Press ▼ or ▲ until "RESET" is displayed in purple.



3 Press ◀ or ▶.
The TV will return to the NORMAL mode in the PICTURE PREFERENCE function. (The settings you have adjusted remain in the MEMORY mode.)

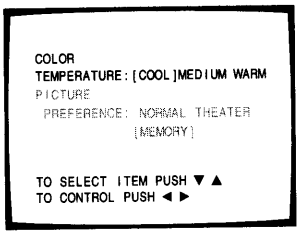


To select the color temperature

These selections change the appearance of gray and white tones of the picture.

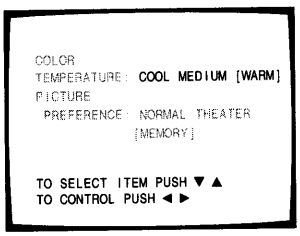
1 Press **MENU** repeatedly until the Picture 2 menu is displayed on the screen.

2 Press ▼ or ▲ until "COLOR TEMPERATURE" is displayed in purple.



3 Press ◄ or ► until the mode you want is displayed in purple.

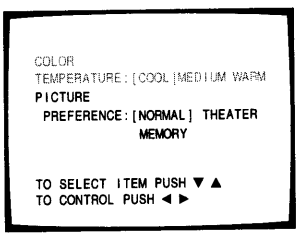
COOL	Bluish
MEDIUM	Neutral
WARM	Reddish



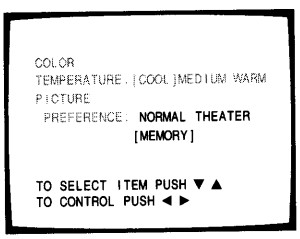
To select the picture preference function

You can select a desired picture tone from three picture preset modes (NORMAL, THEATER, MEMORY) instantly.

1 Select "PICTURE PREFERENCE" following the steps 1 and 2 above.



2 Press ◄ or ► until the mode you want is displayed in purple.



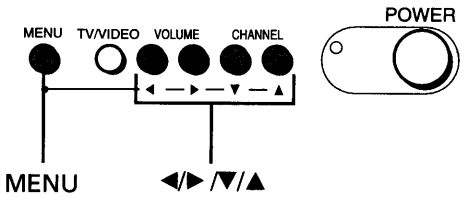
NORMAL	The picture quality preset at the factory
THEATER	Movie-like picture setting
MEMORY	The picture quality you set (First follow page 20.)

Note:
The RESET function adjusts the following picture and audio functions.

- CONTRAST ..... Max.
- BRIGHTNESS ..... Center
- COLOR ..... Center
- TINT ..... Center
- SHARPNESS ..... Center
- COLOR TEMPERATURE ..... COOL
- PICTURE PREFERENCE ..... NORMAL
- BASS ..... Center
- TREBLE ..... Center
- BALANCE ..... Center

Adjusting the Sound

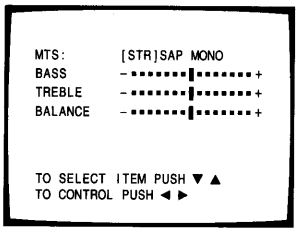
You can adjust the sound quality (BASS, TREBLE and BALANCE) to suit your taste.



To adjust the sound quality

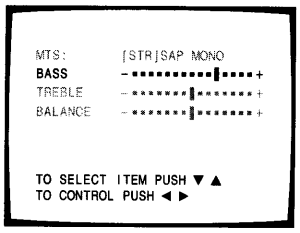
1 Press **MENU** repeatedly until the Audio menu is displayed on the screen.

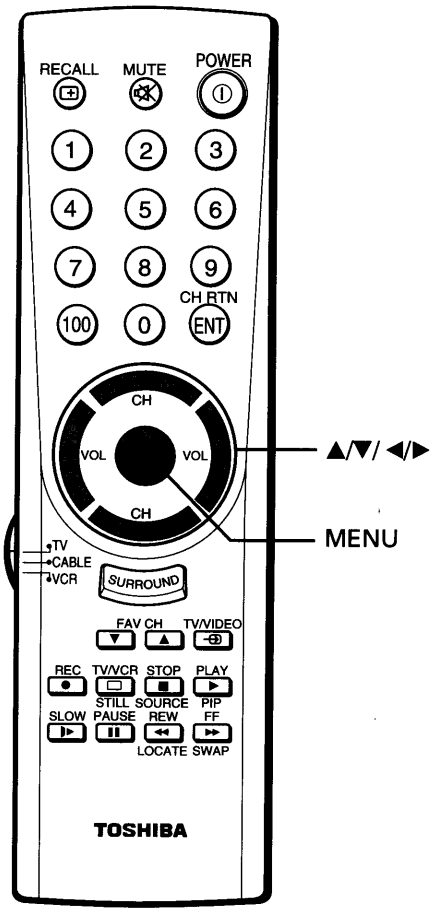
2 Press ▼ or ▲ until the item you want to adjust is displayed in purple.



3 Press ◀ or ▶ to adjust the level.

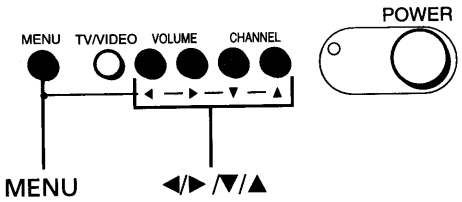
Example: BASS adjustment mode display

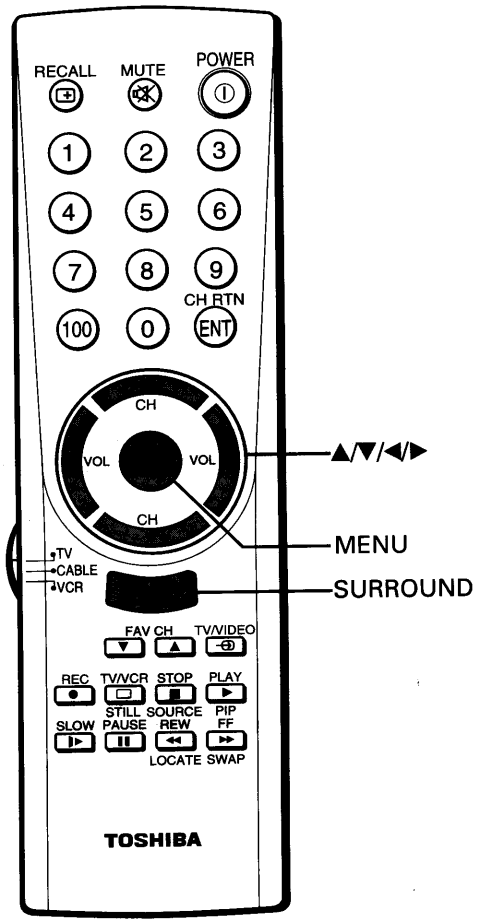




	Pressing	
BASS	weaker	stronger
TREBLE	weaker	stronger
BALANCE	decreases the right channel	decreases the left channel

Note: The RESET function resets these audio adjustments to the factory-preset status. (See page 20.)





Notes:

- When the TV receives a MTS broadcast, the word "STEREO" or "SAP" is displayed on the screen whenever the TV is turned on, a channel is selected, or the RECALL button is pressed.

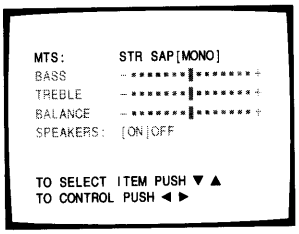
- The MTS function does not operate in the VIDEO mode.

To select Stereo/SAP broadcast

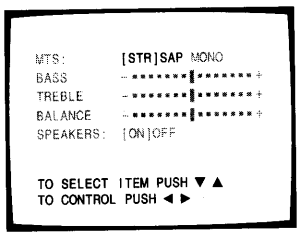
The MTS (Multi-channel TV Sound) feature allows you to improve your TV viewing with high fidelity stereo sound.
This TV also allows you to activate or deactivate the stereo surround sound effect.
MTS also provides for an extra channel, SAP (Second Audio Program), used to transmit a second language or other audio information.

1 Press **MENU** repeatedly until the Audio menu is displayed on the screen.

2 Press ▼ or ▲ until "MTS" is displayed in purple.
The usable selections will be displayed in yellow.



3 Press ◄ or ► to select "STR" or "SAP".
Normally this function can be left in "STR" mode. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.



If the stereo sound is noisy
Be sure you have selected "STR" mode if broadcast is in stereo. However, if a broadcast signal is not strong enough, and noise-free stereo sound is not available, select "MONO" (monaural) mode.
The noise should be reduced.

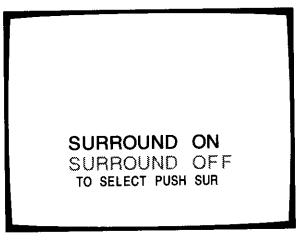
To activate surround sound effect

The Surround function expands the audio listening field wider and deeper than you would believe possible from a TV's speakers. This function processes stereo signals from a TV broadcast or VIDEO input.

1 Select the STEREO mode as described above.

2 Press **SURROUND** until "SURROUND ON" is displayed in purple.

The surround function has now been activated.

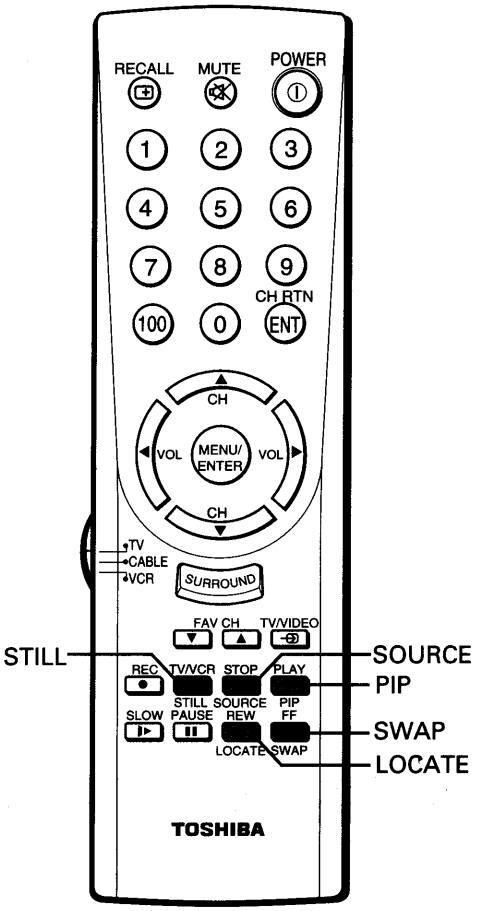


To deactivate the surround effect
Select "SURROUND OFF" in step 2 above.

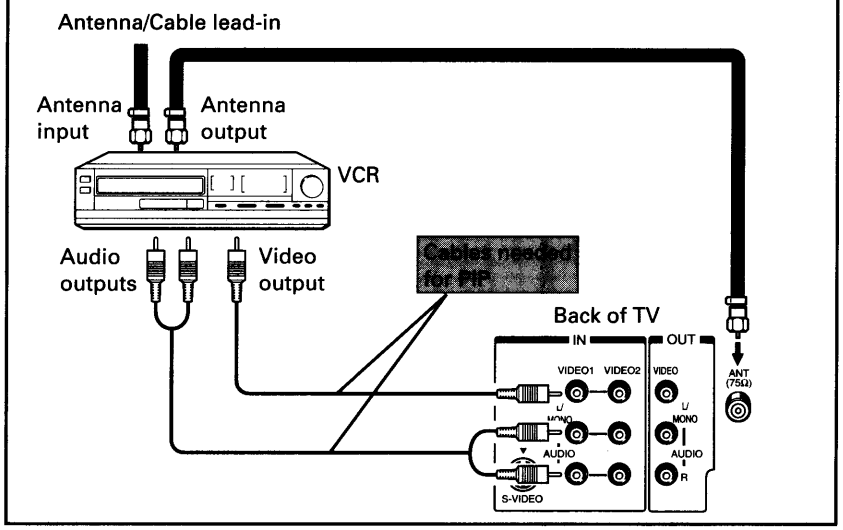
Note: Normally you can leave the "STR" mode turned on and the surround function activated. The TV will automatically produce either surround stereo or monaural, whatever is broadcast.

Watching Picture-in-Picture

In addition to the main picture, another TV program or video source being received through the VIDEO input jacks can be displayed simultaneously as a small picture. This is called PIP (Picture-in-Picture).
Be sure to connect a VCR with the VIDEO/AUDIO cables.

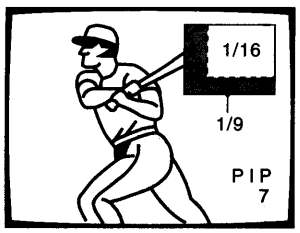


To connect TV and VCR for PIP

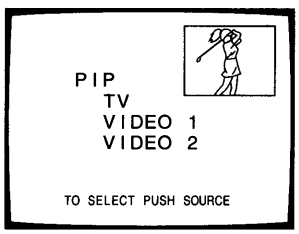


To display a small picture

1 Press **PIP once** to display a small picture.
The 1/9 size window picture will appear.
If you press **twice:** The 1/16 size window picture will appear.



2 Press **SOURCE** to select "VIDEO" input source for the small picture.
The selected source will be displayed in purple.



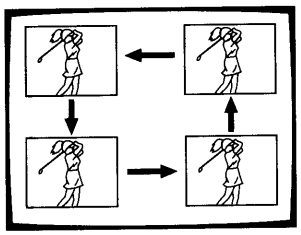
3 Select channels for the PIP using the VCR's channel keys.

To turn off the small picture, press PIP
– **Twice**, if you watch the 1/9 size window picture.
– **Once**, if you watch the 1/16 size window picture.

To use advanced functions

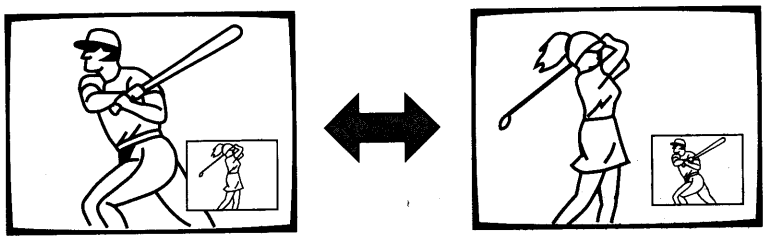
To change the position of the small picture

Press **LOCATE** repeatedly when a small picture is displayed. The display position of the small picture will change in order.



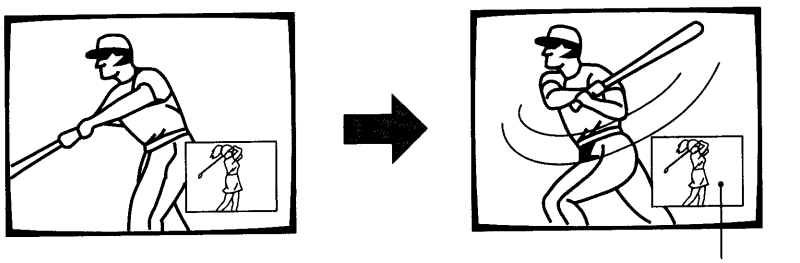
To switch the main and small picture

Press **SWAP** when a small picture is displayed.
The main and small pictures will switch.
To switch them again, press **SWAP** again.

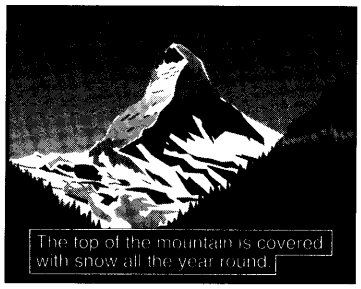


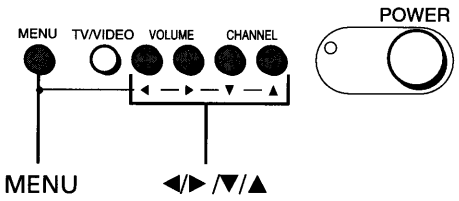
To freeze the small picture

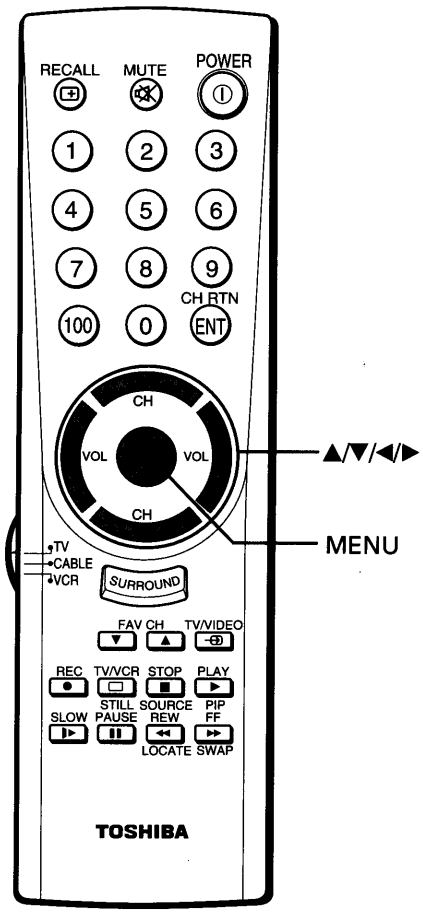
Press **STILL** when a small picture is displayed.
The small picture will become a still picture.
To return to a moving picture, press **STILL** again.



Operating Closed Captioning Feature





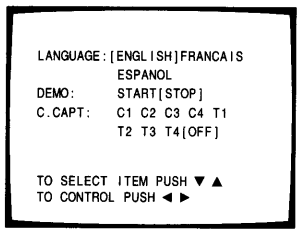


To view captions

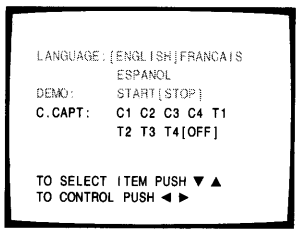
Closed-captioning is a printed version of the dialogue, narration, and/or sound effects of a TV program.
Captions will appear at either the top or bottom of the screen during captioned broadcasts as shown.
Captioning is especially helpful for hearing impaired individuals.

1 Select the desired program.
The captioned programs are usually notated on your local TV listings by its service marks such as "CC".

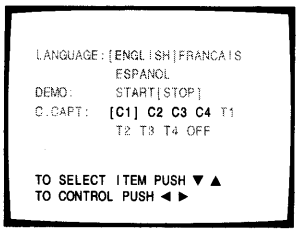
2 Press **MENU** repeatedly until the Option menu is displayed on the screen.



3 Press ▼ or ▲ until "C.CAPT" is displayed in purple.



4 Press ◄ or ► repeatedly until "C1", "C2", "C3" or "C4" is displayed in purple.
("C1" stands for Caption 1, for example.)
Select "C1" for translation of the primary language in your area.

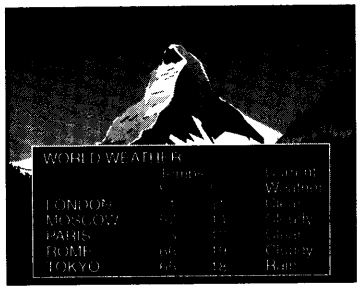


To deactivate this feature
Select "OFF" in step 4 above.

Note: A closed-captioned signal may not be decoded in the following situations.
- When a video tape has been dubbed.
- When the signal reception is weak.
- When the signal reception is non-standard.

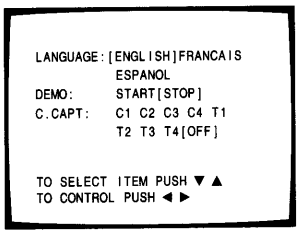
To view text

Text is information that is presented using from one half to full television screen. It is usually not related to the program.
For example, it could be a listing of the closed-captioned programs, news, weather information or stock market reports.

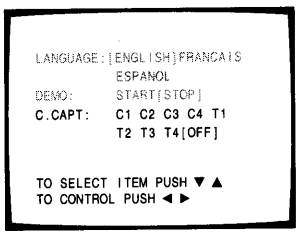


1 Select the desired program.

2 Press **MENU** repeatedly until the Option menu is displayed on the screen.



3 Press ▼ or ▲ until "C.CAPT" is displayed in purple.



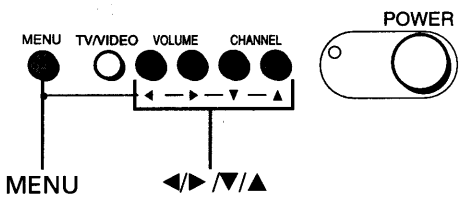
4 Press ◄ or ► repeatedly until "T1", "T2", "T3" or "T4" is displayed in purple.
("T1" stands for Text 1, for example)

To deactivate this feature
Select "OFF" in step 4 above.

Note: If you select a closed-captioned channel and the Text mode, the text screen always appears.
However, text characters are not displayed when no signal is aired.

Locking Channels

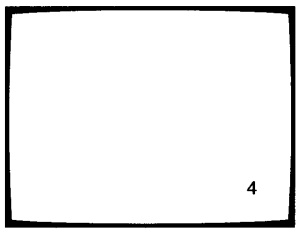
With this function you can lock out specific channels (for example a channel that you do not want your children to watch) by entering your own 4-digit code. The TV will not be able to tune them for the next 24 hours, unless you cancel the locked out channels. There are 4 memory spaces for the TV mode and 4 memory spaces for the CABLE mode.



To lock out channels

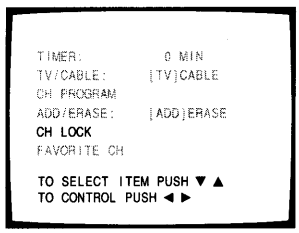
1 Select a channel you want to lock out.

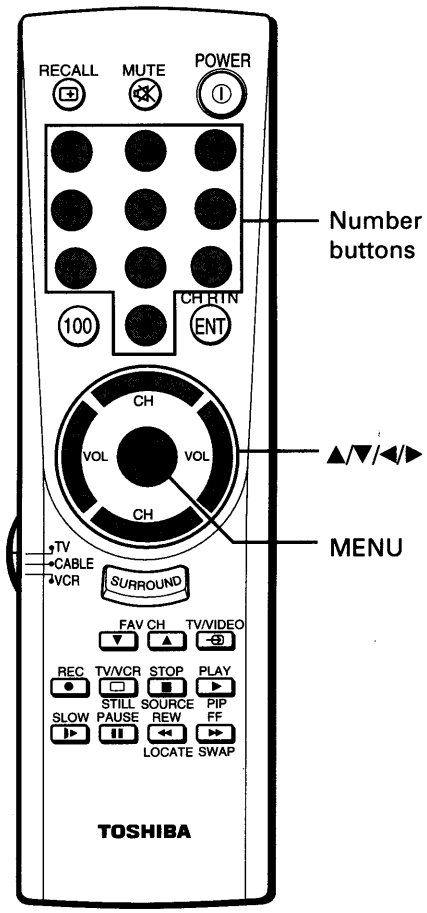
Example: channel 4



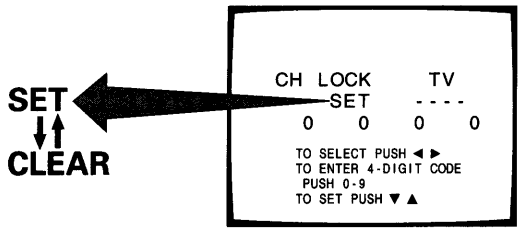
2 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

3 Press ▼ or ▲ until "CH LOCK" is displayed in purple.





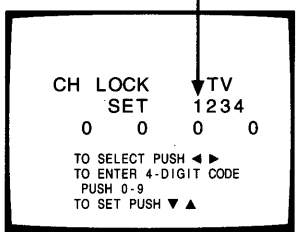
4 Press ◄ or ► to call up the channel lock adjustment display shown below. Each time you press the button, you are guided between "SET" and "CLEAR".
Select "SET".



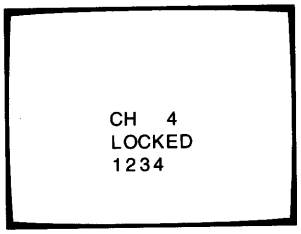
5 Press Number buttons (0 - 9) to enter a 4-digit code.
The numbers you enter will replace the dashes in the display.
Pick a number that is easy to remember.

Example: To enter "1234"
Press 1, 2, 3 and 4 in order.

1 - - - ➡1 2 - - ➡1 2 3 - ➡1 2 3 4



6 Press ▼ or ▲ to lock out the channel.
The display at the right will appear on the screen for about 4 seconds.



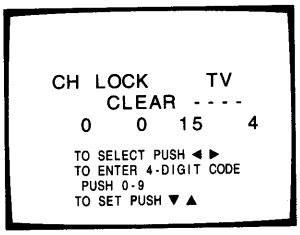
7 Repeat steps 1 to 6 for other channels.

Note: If a different code number is used whenever you lock out a channel, the last one has priority over the preceding ones.

8 Select another channel before turning off the TV.

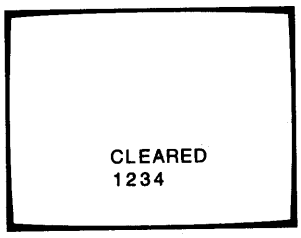
To restore channels

1 Select "CLEAR" following the steps 2 to 4 on the previous page.

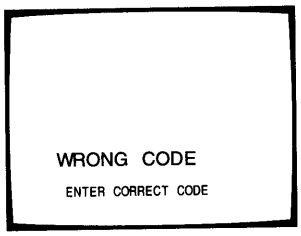


2 Press the 4-digit code used to lock out the channels with the Number buttons.

3 Press ▼ or ▲.
If you have entered the correct code
The display shown at the right appears.



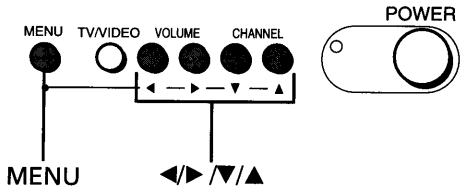
If a wrong code has been entered
These messages appear. Try to enter the correct code again.

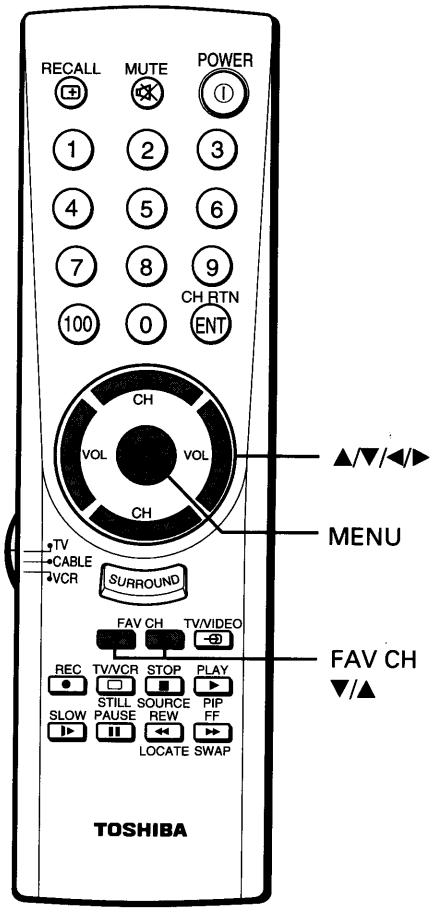


If you want to know the channels you have locked out
Call up the channel lock adjustment mode using the Setup menu.

Programming Your Favorite Channels

The Favorite Channel Programming feature allows you to program up to 12 of your favorite channels.
Once programmed, you can use the FAV ▼/▲ buttons on the Remote Control to scan through only your favorite channels, skipping other channels you do not normally view.
You can use the CHANNEL ▲/▼ buttons to scan through all the channels you programmed in TV's memory.

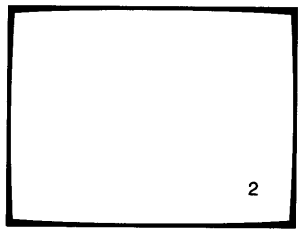




To program your favorite channels

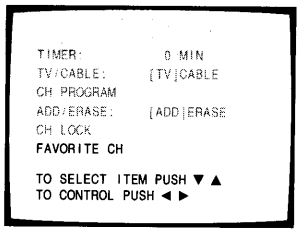
1 Select a channel you want to program.

Example: channel 2

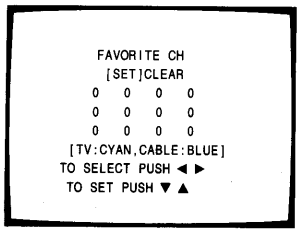


2 Press **MENU** repeatedly until the Setup menu is displayed on the screen.

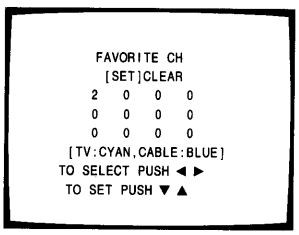
3 Press ▼ or ▲ until "FAVORITE CH" is displayed in purple.



4 Press ◀ or ▶ to display the FAVORITE CH program menu.
Each time you press ◀ or ▶, you are guided between "SET" and "CLEAR" .



5 **To program channels:**
Select "SET". Then press ▼ or ▲ until the channel number to be programmed ("2" in this example) replaces "0" on the display.



To erase channels:
Select "CLEAR". Then press ▼ or ▲ until "0" replaces the channel number to be erased, "2" for example.

6 Repeat steps 1 to 5 for other channels.

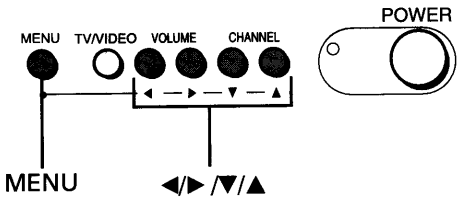
To select your favorite channels

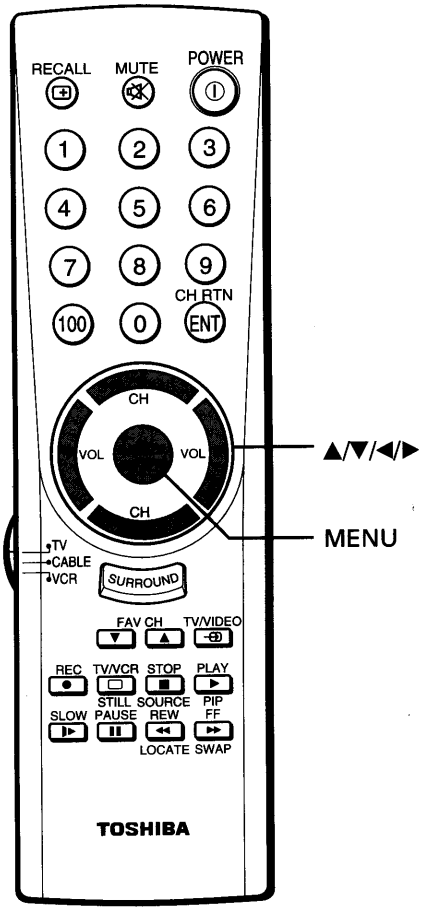
To select your favorite channels you have programmed, use the **FAV** ▼/▲ buttons on the Remote Control instead of using the CHANNEL ▲/▼ buttons.

Note: The FAV ▼/▲ buttons cannot function if you have not programmed your favorite channels.

Changing On-Screen Display Language

You can choose from three different languages (ENGLISH, FRENCH and SPANISH) for the on-screen displays (adjustment menus, and messages).

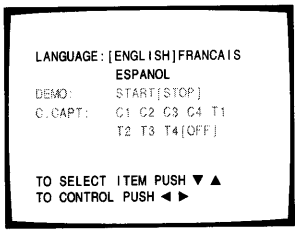




To select a language

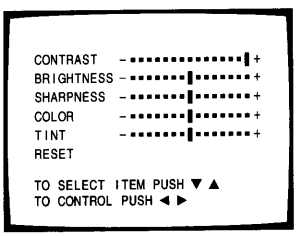
1 Press **MENU** repeatedly until the Option menu is displayed on the screen.

2 Press ▼ or ▲ until "LANGUAGE" is displayed in purple.

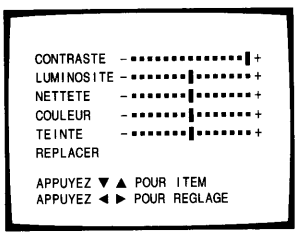


3 Press ◄ or ► until your desired language is displayed in purple.
If you select "FRANCAIS" for example, the display language changes to french.

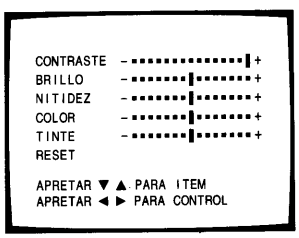
Example: Picture menu display "English"



"French"

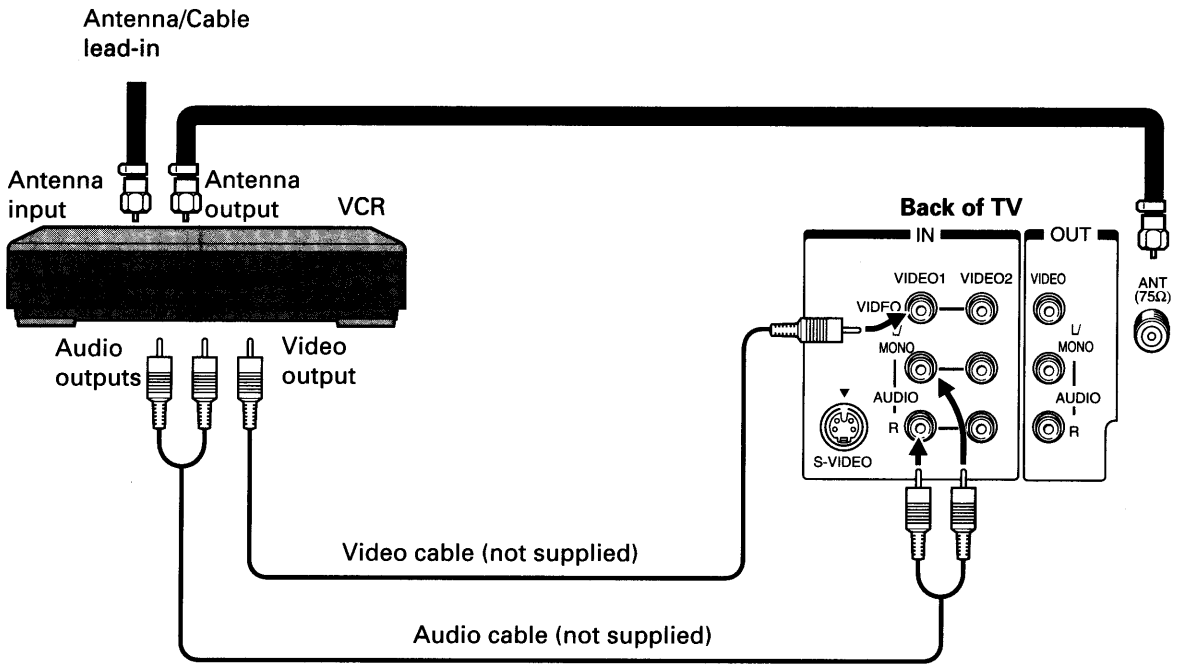


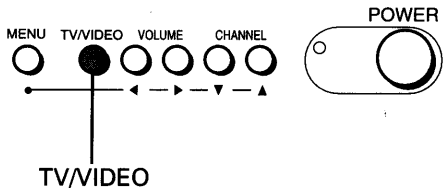
"Spanish"



Connecting a Standard VCR

Connect VIDEO 1 or VIDEO 2 IN jacks on the rear of the TV to the video/audio output jacks of an installed VCR, Laser Disc player, video camera etc. for playback of video material.



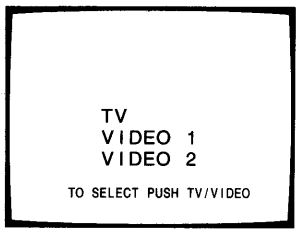


To select the video input source

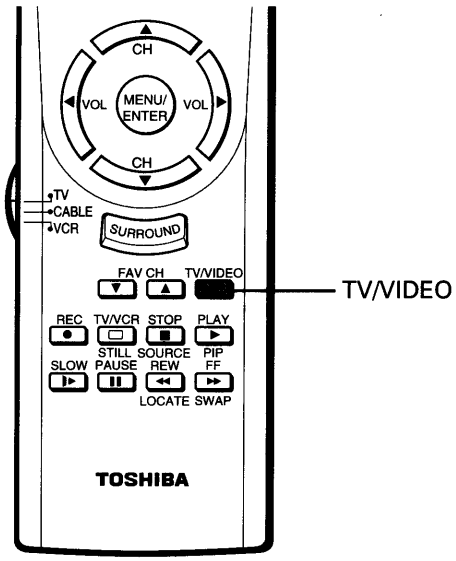
To operate your TV and video equipment properly, refer to the instructions furnished with the video equipment.

1 Turn the TV and VCR ON.

2 Press **TV/VIDEO** to select "VIDEO 1". Each time you press the button, TV, VIDEO 1, or VIDEO 2 source will be selected in order.
The selected source will be displayed in purple.



3 Operate your VCR normally.

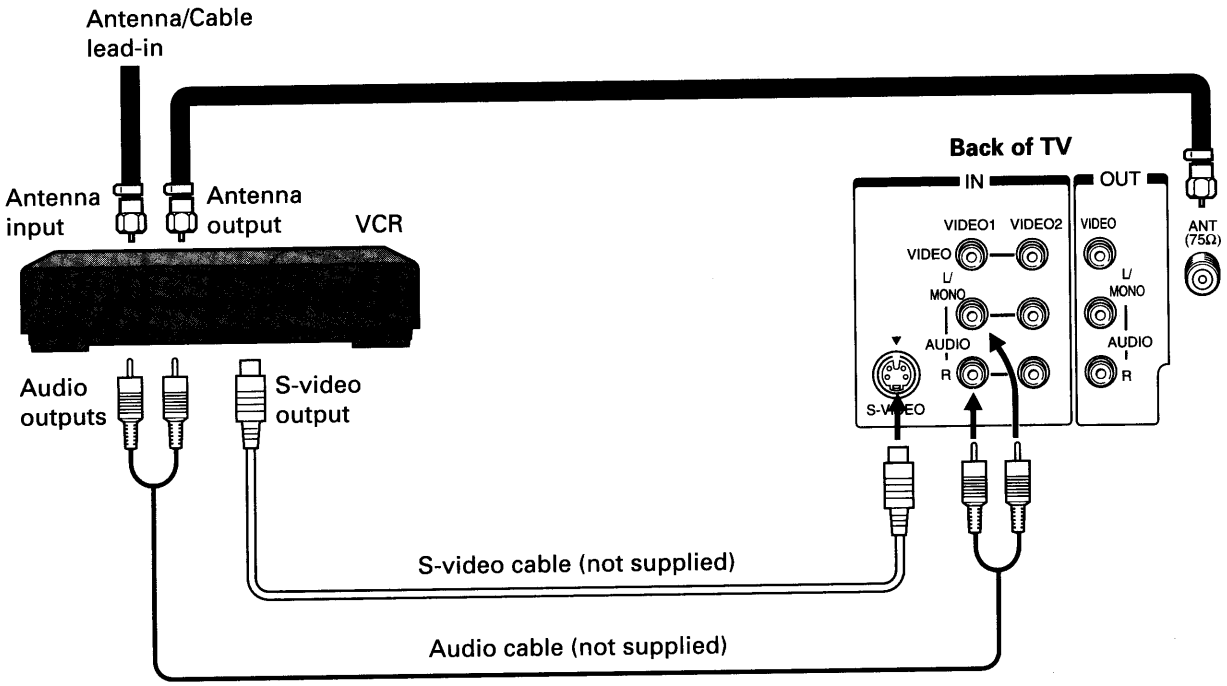


Notes:

- The VIDEO 2 IN jacks can also be used for connecting a second piece of video equipments with video/audio outputs. To view video from equipment connected to the VIDEO 2 IN jacks, select "VIDEO 2".
- If you connect a monaural VCR, connect the audio output of the VCR to the L/MONO jack of the VIDEO 1/2 IN jacks on the TV.

Connecting a VCR with an S-Video Jack

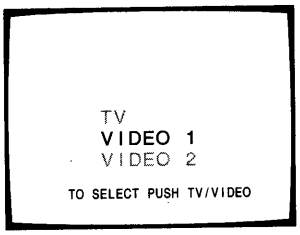
If you connect a VCR with an S-video jack to the S-VIDEO jack on the back of the TV, you must also connect the audio cables to the AUDIO jacks of the VIDEO 1 IN jacks on the back of the TV. The S-video cable only carries the video signal. Audio signals are separate.



To select the video input source

1 Turn the TV and VCR ON.

2 Press the **TV/VIDEO** button to select "VIDEO 1".



3 Operate your VCR normally.

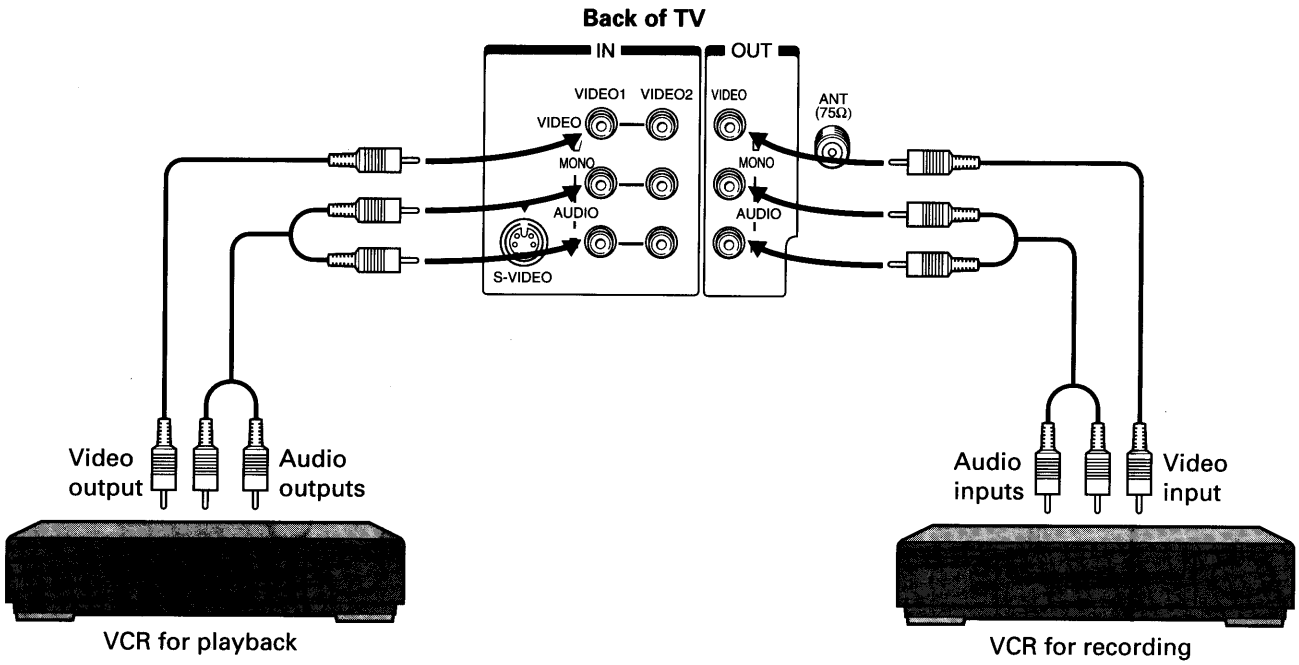
Notes:

- When the S-video cable is connected to the S-VIDEO IN jack, the video cable (phono-type) should not be connected.
- The S-VIDEO jack accepts SEPARATED Luminance/ Chrominance (Y-C) signals conforming to the NTSC standard.

Dubbing/Editing Video Tapes Using 2 VCR's

To dub or edit your own video tapes between one VCR and another, connect the VCR that will play to the input jacks (VIDEO 1 or VIDEO 2) on the TV. Then connect the output jacks on the back of the TV to the input jacks on the recording VCR.

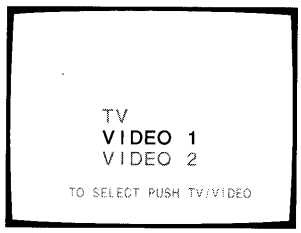
Note: Do not connect one VCR to the output and input jacks on the back of the TV at the same time.



To monitor dubbing/editing

1 Turn the TV and both VCR's on.

2 Press the **TV/VIDEO** button to select "VIDEO 1" (or "VIDEO 2" depending on which input jacks are used for connecting the VCR for playback).



3 Set the VCR for recording to record mode and the VCR for playback to playback mode.

4 You can view the video tape from the VCR for playback on the TV screen while dubbing it with the VCR for recording.

CAUTION:
The unauthorized recording of television programs, video tapes and other materials may infringe upon the provisions of copyright laws.

Notes:

- The input switch of the VCR is normally in the TV position.
  Change the input switch of the recording VCR to the external input position such as LINE or CAMERA when using the video/audio inputs of the VCR as above.
  Some VCR's automatically switch when the cables are plugged into the video/audio inputs.
- The PIP picture cannot be output from the VIDEO OUT jack.
- The "fixed level" audio signal through the AUDIO jacks of OUT jacks is also ideal for connecting an audio cassette recorder (or amplifier) to record sound from the TV. This constant audio signal is not affected by pressing the VOLUME ▲/▼ buttons.

Cleaning and Care

WARNING: TV sets use High Voltage. Do not try to remove the cabinet back. Refer servicing to qualified service personnel.

■ To clean the TV screen:

1. First remove the plug from the power outlet to avoid possible shock hazard.
2. Use a clean cellulose sponge or chamois cloth dampened with a solution of mild detergent and warm water to clean TV screen and trim. Do not use too much water on the TV screen. Water spills into the cabinet and may cause damage to the TV. Avoid excess water.
3. Remove any extra moisture with the same cloth or a dry one.

■ To maintain the finish and appearance of the cabinet, polish it from time to time with a quality furniture polish.

Caution: Never use strong solvents such as thinner, benzene or other chemicals on or near cabinet, as they might damage the finish of the cabinet.

Specifications

TELEVISION SYSTEM	NTSC standard
CHANNEL COVERAGE	VHF: 2 through 13 UHF: 14 through 69 Cable TV: mid band (A-8 through A-1, A through I) super band (J through W) hyper band (AA through ZZ, AAA, BBB) ultra band (65 through 94, 100 through 125)
POWER SOURCE	120V AC, 60Hz
POWER CONSUMPTION	CF27H50: 92W (average) CF32H50: 101W (average) CF36H50: 104W (average)
AUDIO POWER	5W + 5W
SPEAKER TYPE	2-3/8 x 4-3/4 inches (60 x 120 mm)
VIDEO/AUDIO TERMINALS	S-VIDEO INPUT (VIDEO1) Y-INPUT: 1V (p-p), 75 ohm, negative sync. C-INPUT: 0.286V (p-p) (burst signal), 75 ohm VIDEO/AUDIO INPUT (VIDEO1/VIDEO2) VIDEO: 1V(p-p), 75 ohm, negative sync. AUDIO: 150mV(rms) (30% modulation equivalent, 47k ohm) VIDEO/AUDIO OUTPUT VIDEO: 1V(p-p), 75 ohm, negative sync. AUDIO: 150mV(rms) (30% modulation equivalent, 4.7k ohm)
DIMENSIONS	CF27H50: Width 26-inches (660mm) Height 24-inches (610mm) Depth 22-3/8 inches (568mm) CF32H50: Width 30- 13/16 inches (782mm) Height 27-15/16 inches (694mm) Depth 23-1/8 inches (587mm) CF36H50: Width 34-9/16 inches (878mm) Height 30-1/2 inches (775mm) Depth 25-3/4 inches (654mm)
MASS	CF27H50: 73 lbs (33kg) CF32H50: 125 lbs (57kg) CF36H50: 160.9 lbs (73.0kg)
SUPPLIED ACCESSORIES	Remote Control with 2 size "AA" batteries
OPTIONAL TV STAND	CF27H50: — CF32H50: ST3215 CF36H50: ST3615

Design and specifications are subject to change without notice.

Before Calling Service Personnel

Before calling service personnel, please check the following chart for a possible cause of the problem you are experiencing. A minor adjustment on your part may eliminate the problem and restore your TV reception.

Problem	Checks and Adjustments	Page
TV will not turn on	● Make sure the power cord is plugged in, then press POWER button. ● Check battery in the Remote. (Maybe batteries are "dead".)	17 9
No picture, no sound	● Check antenna/cable connections.	
No sound, picture OK	● Maybe sound is muted. Try pressing VOLUME ▲ button. ● Try another channel. (Maybe station trouble.)	17
Poor sound, picture OK	● Try another channel. (Maybe station trouble or local interference from appliance.)	
Poor picture, sound OK	● Check antenna/cable connections. ● Try another channel. (Maybe station trouble or local interference.) ● Adjust Picture menu.	 20
Poor reception of broadcast channels	● Try another channel. ● Check antenna connections. ● If using VCR, check TV/VCR button.	 10
No UHF, VHF OK	● Make sure TV/CABLE function is in "TV" mode.	15
Black box appears on the screen	● Captioning may be turned on.	26
Unable to select a certain channel	● That channel may be locked out with CH LOCK function, or erased with the ADD/ERASE function.	28 16
Multiple images (ghosts)	● Try another channel. (Maybe station trouble.) ● Use a highly directional outdoor antenna.	
Poor color or no color	● Try another channel. (Maybe station trouble or local interference.) ● Adjust TINT and/or COLOR in the Picture menu. ● If you change the direction of the TV while the TV is activated, the picture may suffer from color shading. If so, turn off the TV and allow it to cool for about 30 minutes, then turn on the TV again. The picture should improve.	 20
No stereo or SAP sound from a known MTS broadcast	● Check if MTS function is properly set.	23
The Remote Control does not operate	● Check if Device buttons are properly set. ● Maybe something is between the Remote and the remote sensor. ● Maybe batteries are "dead". Try replacing batteries with new ones. Insert them with the correct polarity.	8, 10 9

Limited United States Warranty

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty
TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you. "Authorized TACP/THI service station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the authorized TACP/THI service station for repair and returned to your home at no cost to you."

Limited Two (2) Year Warranty of Picture Tube
TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will replace a defective picture tube without charge to you, except that if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Rental Units
The warranty for rental units begins with the first rental ot thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units
Products sold and used for commercial use have a limited ninety (90) day warranty for all parts, labor and picture tube.

Owner's Manual and Demographic Card
You should read this owner's manual thoroughly before operating this product. You should complete and mail the enclosed Demographic card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the Demographic card will not affect your rights under this warranty.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
(3) These warranties are effective only if the product is purchased and operated in the U.S.A.or Puerto Rico.
(4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, damage caused by Acts of God, such as lightning or fluctuations in electric power, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have had the serial number removed, altered, defaced or rendered illegible.

How to Obtain Warranty Service

If after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL", you find that service is needed;

(1) Call the TACP toll free number **1-800-631-3811** after you find a defective product or part to find the nearest TOSHIBA Authorized Service Station.
(2) Please present your bill of sale or other proof to the Authorized Service Station.
"Authorized TACP/THI service station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the TACP/THI Authorized service station for repair and returned to your home at no cost to you."

IN THE CONTINENTAL UNITED STATES
Should your unit require service, Call:

HAWAII, 327 Kamakee Street, Honolulu, HI 96814
(808) 521-5377

Ⓐ

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP or THI be liable for consequential or incidental damages.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which action must be commenced to enforce any obligation of TACP or THI arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to 90 days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.

ATTENTION CANADIAN CONSUMERS:

Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty.

Products purchased in the U.S.A. and used in Canada are not covered by these warranties.
Products purchased in Canada and used in the U.S.A. are not covered by these warranties.

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

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WEST: 5490 E. FRANCIS ST., ONTARIO, CA 91761
SOUTHWEST: 1421 CHAMPION DRIVE, SUITE 304 CARROLLTON, TEXAS 75006
SOUTHEAST: 6115 JIMMY CARTER BLVD., SUITE C2, NORCROSS, GA 30071-4607

TOSHIBA HAWAII, INC.

HEAD OFFICE/327 KAMAKEE STREET, HONOLULU, HAWAII 96814, U.S.A.

TOSHIBA OF CANADA LTD.

HEAD OFFICE/191 McNABB STREET, MARKHAM, ONTARIO, L3R 8H2, CANADA TEL: (905) 470-5400
SERVICE CENTERS/TORONTO: 191 McNABB STREET, MARKHAM, ONTARIO, L3R 8H2, CANADA TEL: (905) 470-5400
MONTREAL: 1643, NORTH SERVICE RD., TRANS-CANADA HIGHWAY, DORVAL QUEBEC, H9P 1J1, CANADA TEL: (514) 856-4100
VANCOUVER: 22171 FRASERWOOD WAY, RICHMOND, B.C.,V6W 1J5 TEL: (604) 303-2500

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